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BOTANICAL MAGAZINE;

OR

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In which the most Ornamental Foreign Plants cultivated in the Open Ground,
the Green-House, and the Stove, are accurately represented and coloured.
To which are added,
THEIR NAMES, CLASS, ORDER, GENERIC AND SPECIFIC CHARACTERS,
ACCORDING TO THE SYSTEM OF LINNÆUS;
Their Places of Growth, Times of Flowering, and most approved
Methods of Culture.

CONDUCTED
By SAMUEL CURTIS, F. L. S.
THE DESCRIPTIONS
By WILLIAM JACKSON HOOKER, L. L. D.
F. R. A. and L. S. and Regius Professor of Botany in the University
of Glasgow.

VOL. VIII.
OF THE NEW SERIES;
Or Vol. LXI. *of the whole Work.*

Observe the rising Lily's snowy grace,
Observe the various vegetable race;
They neither toil nor spin, but careless grow,
Yet mark how warm they blush, now bright they glow!
What regal vestments can with them compare,
What king so shining, or what queen so fair?

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1834.

SHOUT
SHARE
IT

TO

HIS GRACE

WILLIAM,

DUKE OF DEVONSHIRE, K. G.

LORD HIGH CHAMBERLAIN OF HIS MAJESTY'S HOUSEHOLD,

&c. &c. &c.,

WHOSE ARDENT LOVE OF BOTANY AND HORTICULTURE

IS ONLY EQUALLED

BY HIS TASTE AND JUDGMENT IN THE FINE ARTS,

SO EMINENTLY DISPLAYED AT HIS PRINCELY RESIDENCE OF

CHATSWORTH,

THE PRESENT VOLUME IS DEDICATED,

WITH SENTIMENTS OF THE HIGHEST REGARD AND ESTEEM,

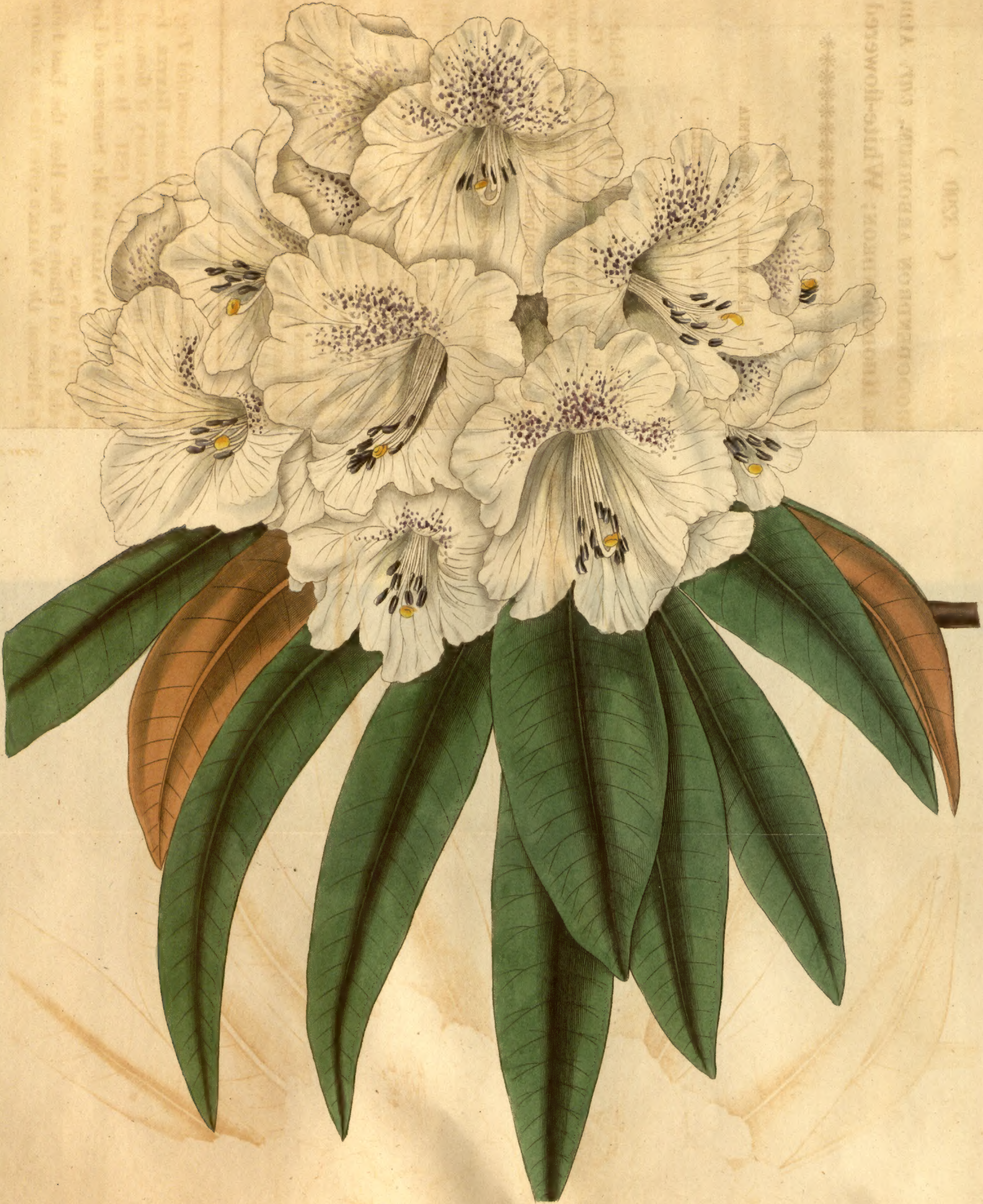
BY HIS FAITHFUL

AND VERY OBEDIENT HUMBLE SERVANT,

W. J. HOOKER.

GLASGOW, Dec. 1, 1834.

3290.



W.J.H. del.^{t} Pub. by S. Curtis. Glazenwood Essex Jan.^{y} 1. 1834. Swan Sc.

Rhododendron arboreum, *var.* **album.**

Tree Rhododendron; White-flowered *var.*

****

Class and Order.

Decandria Monogynia.

(Nat. Ord.—Ericeæ.)

Generic Character.

Cal. 5-partitus. *Cor.* infundibuliformis, 5-loba. *Stam.* 5—10, declinata: antheris apice biporosis. *Capsula* 5-locularis, 5-valvis, ab apice dehiscens, valvarum marginibus inflexis dissepimenta formantibus: *Receptaculum* centrale, 5-angulare. *Semina* membrana involuta.

Specific Character and Synonyms.

Rhododendron *arboreum;* foliis oblongo-lanceolatis nitidis subtus pubescentibus, racemis terminalibus globosis, capsulis 10-locularibus, caule arboreo.
Rhododendron arboreum. *Sm. Ex. Bot. t.* 9. *Hook. Ex. Fl. t.* 168. *Bot. Reg. t.* 890.
Var. γ album; floribus albis intus purpureo-maculatis, foliis subtus ferrugineis. (Ic. nostr. 3290.)
Rhododendron arboreum, γ. album. *Wall. List, n.* 755.
Rhododendron album. *Hamilt. MSS. Don, Prodr. Nep. p.* 154. *Sw. Brit. Fl. Gard. N. Ser. t.* 148.

The drawing here figured of this beautiful *Tree Rhododendron* was communicated by Robert Baxter, Esq., Dee Hills, Chester, in whose conservatory it flowered in very great perfection in February, 1831. It was raised from seeds sent by Dr. Wallich to Mr. Shepherd of Liverpool, about twenty years ago.

In the List of Plants of the Hon. the East India Company's Museum, Dr. Wallich gives this as a native of the high mountains of Nepal, where he gathered it in 1821. I have followed the same author in considering it a variety of R. *arboreum,* not having had an opportunity of seeing the plant myself. But it is only fair to observe, that Mr. Don and Mr. Sweet, following Dr. Hamilton, have described it as a distinct species; observing that it derives its most essential specific character from the circumstance of every alternate filament of the stamen bearing an appendage a little above the base, sometimes one on each side.

Dr. Hamilton appears to have first discovered the plant on a mountain at Narainhatty, in 1803. It flowered for the first time in Europe in Mr. Baxter's Collection.

3291.

W.J.H. delt

Pub by S. Curtis Glazenwood Essex Jany 1 1834.

Swan Sc.

(3291)

TRADESCANTIA PILOSA. HAIRY SPIDERWORT.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—COMMELINEÆ.)

Generic Character.

Cal. et *Cor.* profunde tripartitæ. *Filamenta* plerumque villosa. *Capsula* 3-locularis. *Spr.*

Specific Character and Synonyms.

TRADESCANTIA *pilosa;* caule erecto flexuoso geniculato-nodoso superne villoso, foliis lanceolatis, superioribus bracteisque lanceolatis, pedunculis calycibusque valde villosis, floribus terminalibus umbellatis.
TRADESCANTIA pilosa. *Lehm. Ind. Sem. Hort. Hamb.* 1827. *Roem. et Sch. Syst. Veget. v.* 7. *p.* 1175.
TRADESCANTIA Virginica ξ. *Red. Lil. sub fol.* 98.

Raised from roots sent by Mr. DRUMMOND from Louisiana to the Glasgow Botanic Garden, where it flowered during the autumn of 1833, and requiring the same treatment with its allies T. *Virginica* and T. *subaspera.* From both of these it differs in the extremely hairy leaves and flower-stalks and calyces and smaller flowers, and from T. *Virginica* β. *pilosa,* LINDL. in Bot. Reg., by the very hairy (not simply ciliated) and vastly broader and shorter foliage. From Dr. LEHMAN'S T. *pilosa* it only seems to depart in the absence of glands on the pedicels and calyx.

DESCR. *Stem* two to three feet high, dichotomously branched and jointed, swollen at the joints, particularly in the lower part of the stem, which, moreover, is quite glabrous, whereas the upper part is densely hairy. *Leaves* embracing their stem at the base, but scarcely sheathing, lanceolate, wavy, striated, the lower ones downy, the upper and bracteas densely hairy: the latter have their bases somewhat cucullate. *Flowers* numerous in terminal umbels from the axil of the two opposite bracteas, the *pedicels* curved, and, as well as the calyx, exceedingly villous with long white, patent hairs, but scarcely glandular. *Flowers* bright purplish-blue, as well as the *filaments*, and *hairs* of the *filaments*. *Anthers* bright yellow.

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W. J. H. del. Pub by S. Curtis Glazenwood Essex Jan. 1. 1834. Swan Sc.

LOBELIA PUBERULA, β. BLUE DOWNY LOBELIA *variety*.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—LOBELIACEÆ.)

Generic Character.

Corolla tubo hinc fisso (raro integro); limbo 5-partito. *Antheræ* connatæ. *Stigma* bilobum (nunc indivisum). *Capsula* bilocularis, (raro 5-loc.,) apice supero bivalvi.—Herbæ (*v.* Suffrutices) *pleræque lactescentes.* Folia *alterna, integra v. laciniata, raro fistulosa.* Flores *racemosi, terminales v. axillares, solitarii, pedicellis bibracteatis v. nudis.* Antheræ *sæpius barbatæ.*

Specific Character and Synonyms.

LOBELIA *puberula;* obsolete pubescens, caule erecto angulato, foliis oblongis obtusis denticulatis, spica elongata terminali, segmentis calycinis erectis subulato-lanceolatis integerrimis sinubus paululum reflexis, staminibus inclusis.

LOBELIA puberula. *Mich. Am. v.* 2. *p.* 152. *Pursh, Am. v.* 2. *p.* 447. *Elliott, Carol. v.* 1. *p.* 267. *Roem. et Sch. v.* 5. *p.* 55. *Spreng. Syst. Veget. v.* 1. *p.* 717.

β. *glabella;* foliis obsoletissime pubescentibus, calycibus glaberrimis. (Ic. nostr. *t.* 3292.)

This is a highly interesting addition to our garden *Lobelias,* and was introduced last year by Mr. DRUMMOND, who sent the seeds from Jacksonville in Louisiana. The species appears, indeed, to be little known even to the American Botanists, and is probably confined to the southern States. Its nearest affinity is perhaps with L. *siphilitica,* but its spike is less dense and vastly more elongated, its flowers smaller, of a brighter colour, deeply bipartite, the upper lip bifid, the segments much reflexed, not split down so far that the stamens are excluded as in the last named species.

DESCR. The root is perennial. *Stem* erect, simple, two to three feet high, angled, very slightly downy. *Leaves* alternate, remote, three to four inches long, oblong or elliptical-lanceolate, sessile, dentato-serrate, in our specimens nearly glabrous, gradually smaller upwards; the radical ones subspathulate. *Spike* eight to ten inches to a foot long, slender, lax. *Flowers* on short pedicels, spreading, bracteated; bracteas lanceolate, wavy, with glandular serratures. *Calyx-segments* almost as long as the tube of the corolla, erect, lanceolato-subulate, entire, edged with red, the sinuses reflexed. *Corolla* bright purplish-blue, divided almost to the base into two portions; the upper one linear, bifid, the segments acute, reflexed, the lower broad and reflexed at the extremity, three-lobed, with two oval, white, protuberant spots, the lobes ovate. *Stamens* included in the corolla.

Fig. 1. Calyx with the upper Lip of the Corolla, Stamens, and Pistil. 2. Lower Lip removed from fig. 1:—*magnified.*

3293.

Hon.ble C.E.C.Norton & M.Young, del.

Pub by S. Curtis

OPUNTIA BRASILIENSIS. BRAZILIAN PRICKLY-PEAR.

****

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—CACTEÆ.)

Generic Character.

Sepala numerosa, ovario adnata, foliiformia, summa plana brevia, intima petaliformia obovata rosacea expansa, tubo supra ovarium nullum. *Stam.* numerosa petalis breviora. *Stylus* cylindricus basi constrictus. *Stigmata* plurima, erecta, crassa. *Bacca* ovata, apice umbilicata, tuberculata, sæpius spinifera. *Embryo* subspiralis teretiusculus. *Cotyledones* semiteretes, germinantes foliaceæ planæ crassæ. *Plumula* parva.—Frutices, *trunco demum tereti, juniore ramisque rarissimis cylindricis sæpius plus minus compressis articulatis, articulis ovatis aut oblongis fasciculos aculeorum aut setarum ordine quincunciali seu spirali dispositos gerentes.* Folia *sediformia caducissima subquoque fasciculo juniore.* Flores *e fasciculis aut marginibus articulorum orti, flavi aut rubentes.* Stam. *tactu subirritabilia.*

Specific Character and Synonym.

OPUNTIA *Brasiliensis;* arborea, caule erecto tereti stricto elato recto, ramis abbreviatis patentibus s. declinantibus, articulis ultimis compressis foliaceo-planis obovatis spinis solitariis longis subulatis albis apice fuscis armatis lanugine obsoleta.

OPUNTIA Brasiliensis. *D C. Prodr. iii. p. 474. No. 33.*

The accompanying beautiful and very accurate delineation is the joint production of two ladies, whose talent in executing is only equalled by their zeal and readiness in

undertaking whatever may be useful in the cause of Botanical science; the Hon. Miss Norton and Miss Young.

Though of comparatively recent introduction to Madeira, O. *Brasiliensis* now occurs in several gardens at Funchal, flourishing without the slightest care or attention. Its principal flowering season is May or June; but blossoms are often produced more or less throughout the year. The fruit figured was ripe in May, simultaneously with the inflorescence; but August or September is its more abundant season.

The peculiar habit and mode of growth at once distinguish this species. It rises with a perfectly straight, erect, slender, but firm and stiff, round stem, to a height of from ten to twenty, or even thirty feet, very gradually tapering to a point from a diameter of two to six inches at the base, and furnished all the way up with short, mostly horizontal or declining branches, spreading round on all sides not more than a yard in any part from the main stem, and gradually becoming shorter upwards; often altogether ceasing a little below the summit. The whole *plant* resembles a straight, taper pole, artificially dressed up with branches. *Main stem* perfectly round, continuous and straight throughout; formidably armed with fascicles of long, slender, subulate, very sharp, pale or ash-coloured spines, several together. *Branches* horizontal or declining, short, from flattened or triangular becoming downwards round; armed with spines like those of the stem, but fewer in a fascicle. The ultimate joints are obovate, or obovato-oblong, approaching often to lanceolate, sometimes truncate; the margins a good deal sinuated. They resemble leaves in appearance and thickness, more than in any other described species of Opuntia; being only about twice as thick as those of Cereus *Phyllanthus* or *phyllanthoides*, D C., but stiffer. They are armed on both sides with solitary, long, slender, subulate, spines, which are white with chestnut-brown tips, and very sharp; each seated at the summit of a slight, irregular tubercle: the down at their base is obsolete or altogether wanting. The whole plant is a bright green inclining to yellow, especially in young or sickly plants: the lower part of the stem only is brownish-ash-colored. The *flowers* open in long succession, being abundantly produced all over the plant from the prominent parts of the edges of the terminal joints. They are bright lemon-yellow, middle-sized; when expanded, from an inch to an inch and half in diameter; without any tube. *Petals* imbricated, sub-patent; the outer ones short, thick, and fleshy; the inner from half an inch to an inch long. *Style* longer than the stamens, pale yellow, thickish, swollen downwards, solid, or with only a thread-like, central hollow towards the top. *Stigma* of generally five, sometimes four, pale yellow, finally ferruginous-bordered, erect, subconnivent, ovate lobes. *Filaments* and *anthers* pale. *Germen* half or three quarters of an inch long, cup-shaped at top, uneven, angulato-tubercular, bearing a minute, fleshy, ovato-globose, yellowish, deciduous leaf at the summit of each irregular tubercle, inside of which is a fascicle of short, minute, chestnut bristles: a vertical section discovers the central, subtriangular, cell-like ovarium, containing from one to five ovules. *Fruit* subglobose, approaching to oval more or less, with the cup-shaped hollow at the top obsolete, so as to be often truncate, from an inch to an inch and half in diameter, the colour of a Magnum-bonum Plum; perfectly even, but furnished with short, dense fascicles, tufts, or branches, of rich chestnut-coloured bristles, contrasting beautifully with the delicate transparent yellow of the thin, smooth skin. A few of these are twice as long as the rest: all are extremely deciduous, brittle, and acute, so as to render the examination of the fruit more than ordinarily troublesome. It is hardly possible to touch the plant when in fructification without getting the skin or clothes full of these bristles. Inside of the *fruit* pale yellowish-white, containing in the middle from one to four, much flattened, rather large round seeds, three or four lines in diameter, enveloped in a singular, dense, cottony mass of fibres. The fruit is rather agreeable, juicy, with a fine acid, somewhat resembling an indifferent, hard-fleshed, or unripe Plum, with a smell and slight flavour like the leaf-stalks of garden Rhubarb. *Rev. J. T. Lowe.*

Fig. 1. Diminished sketch of the whole Plant. 2. Branch with Flowers and ripe Fruit. 3. Vertical Section of the Germen and Style, with the Stamens and a single Petal. 4. Pistil split down and spread open. 5. Seed from the ripe Fruit:—fig. 2—5 *nat. size;* the rest *magnified.*

3294.

Mr Jas McNab del. Pub. by S. Curtis, Glazenwood, Essex Jan. 1. 1834 Swan Sc.

LIBERTIA FORMOSA. BEAUTIFUL LIBERTIA.

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Class and Order.

TRIANDRIA MONOGYNIA. *Sp.* (MONADELPHIA TRIANDRIA.)

(Nat. Ord.—IRIDEÆ.)

Generic Character.

Cor. 6-partita rotata, laciniis exterioribus minoribus angustioribus. *Filamenta* distincta. *Stigmata* 3 simplicia. *Caps.* subglobosa. *Spr.*

Specific Character and Synonym.

LIBERTIA* *formosa;* caule folioso, foliis radicalibus caule brevioribus margine lævibus, laciniis perianthii exterioribus ovatis apice subherbaceis carinatis, interioribus unguiculatis cordatis retusis, filamentis basi cohærentibus, fructibus flore minoribus.

LIBERTIA formosa. *Grah. in Edin. New Phil. Journ. June,* 1833.

This species flowered beautifully in Mr. CUNNINGHAM'S nursery, at Comely Bank, Edinburgh, in May, having been received from Mr. Low at Clapton, who raised it from seeds imported from near the southern extremity of the continent of America by Mr. ANDERSON. Its root forms a number of crowns, by which it no doubt may be propagated, and it probably will ripen seeds in the greenhouse.

This Genus was separated from SISYRINCHIUM by Mr. BROWN, and the name of RENEALMIA, for a time suppressed by SMITH, given to it; but as the Genus RENEALMIA has been restored upon good grounds by ROSCOE, it becomes necessary to adopt from SPRENGEL the appellation of LIBERTIA for the Genus of BROWN, which is a most natural one.

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* So named, it would appear, in compliment to Mademoiselle LIBERT DE MALMEDY, "femme véritablement savante et modeste," and to whom the French Flora is indebted for a great number of new and interesting species. The *Libertia* of DUMORTIER is *Hosta* of TRATTINICK, *Funkia* of SPRENGEL, and *Libertia* of LEJEUNE, scarcely appears different from BROWN'S.

DESCR. *Root-leaves* (six inches to one foot long, two to four and a half lines broad) equitant, every where glabrous, membranous at the edges of the sheath, linear-sword-shaped, acute, nerved, the central nerve thicker and stronger than the rest; *stem-leaves* few (about three) sheathing, smaller upwards, (the uppermost an inch and a half long) in form and structure like the root-leaves. *Stem* (one foot four inches high) simple, very slightly compressed, glabrous, light green, jointed at the origin of the leaves. *Flowers* capitate, *pedicels* light green, round, glabrous, *outer spathe* bivalvular, longer than the pedicels, membranous, repeated on the inner flowers, which expand in succession. *Perianth* superior, six-partite, glabrous, rotate; *tube* none; *outer segments* small, narrow, ovate and colourless at the base, concave, keeled and subherbaceous at the apex; *inner segments* (seven lines long, six lines broad) about twice the length of the outer, unguiculate, cordate, entire, very slightly crisped, retuse at the apex, somewhat fleshy or like white wax, with a distinct subdiaphanous middle rib, and very faint diverging lateral nerves. *Stamens* three, inserted into the base of the corolla, opposite to the outer segments, about as long as the inner; *filaments*, like these segments, pure white, erect, cohering for about a quarter of their length, above which they diverge a little; *anthers* yellow, incumbent, oblong, cleft at both ends, but especially at the lower, opening along the sides. *Stigmata* minute, terminal, capitate, colourless. *Style* white, single, shorter than the stamens, cleft into three to the point where the filaments cohere, segments diverging between the filaments, each thicker than the cohering part included within the sheath of the filaments. *Germen* inferior, oblong, triquetrous, green, glabrous, three-locular. *Ovules* numerous, oblong, mutually impressed, fixed into a central placenta. *Graham.*

Fig. 1. Flower. 2. Style and Stamens. 3. Capsules. 4. Single Capsule, burst:—*magnified.*

3293.

Tweedie Esq.r del.

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Swan Sc.

HELIANTHUS SPECIOSUS. SHOWY MEXICAN SUN-FLOWER.

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Class and Order.

SYNGENESIA FRUSTRANEA.

(Nat. Ord.—COMPOSITÆ. Div. HELIANTHEÆ.)

Generic Character.

Achenium compressum, conforme, paleis magis minusve deciduis, binis pluribusve minoribus coronatum.—Herbæ *sæpe altissimæ, rarius* frutices, *Americæ indigeni, foliis oppositis vel alternis integris (vel fissis) asperis; capitulis luteis solitariis et terminalibus vel corymbosis; involucris polyphyllis imbricatis, rachide plana.*

Subgen. LEIGHIA. CASS. *Pappus* pluripaleaceus, persistens, paleis duabus omnium longissimis et oppositis. *Involucrum* disco longius, imbricatum, foliolis exterioribus appendiculo foliaceo terminatis. *Lessing.*

Specific Character.

HELIANTHUS *speciosus;* foliis cordatis integris trilobisque, pedunculo superne incrassato, involucro foliaceo, paleis acuminatissimis cuspidatis longitudine flosculorum tubulosorum.

Along with the very beautiful drawing here figured, my obliging correspondent, THOMAS GLOVER, Esq. of Manchester, sent me the following account of this charming HELIANTHUS. " Mr. EDWARD LEEDS of this place, who has lately commenced business as a Nurseryman and Florist, from among a packet of seeds from the Botanic Garden, Mexico, sent to him by W. HIGSON, Esq. of Manchester, has raised several plants that are not known in this neighbourhood. Only one, the subject of my present communication, has flowered, and an unfortunately early frost has cut it completely off. A single blossom which Mr. Leeds had given me to draw is all that is saved, and its beauty now is passed: I think, however, I have been successful in delineating its character and colour, and I send you the fragments for examination. Only one seed vegetated; and the title upon the paper was 'Composita *speciosa*:'—and it is said to have come from Jorullo. The plant came up to the height of about eighteen inches, very much like a common Sun-flower, the outer and lower leaves being about the size of the one sent, and the inner ones smaller, and very close together at the top, as in the Sun-flower, with all the leaves entire. It then threw out lobed leaves, and became a very different looking plant. It rose to the height of about five feet, beset with branches very thickly all the way from the bottom to the top, the lower ones projecting nearly horizontally from the plant, turning up at the ends, and about eighteen inches long, the rest gradually decreasing in length up to the top and forming a complete cone. The first flower which appeared was at the termination of the main branch, and quite erect, and afterwards each lateral one threw out a flower at its termination rather in a horizontal direction, the end of the flowering stalk inclining upwards. The stem is round, and covered with a fine silky substance, but the leaves are rather coarse, and very subject to be infested with *Aphis*."

I confess I have had some difficulty in referring this plant to its proper Genus: the swollen peduncle, orange-coloured flowers, and lobed leaves, would lead me to consider it a Tithonia; perhaps even T. *tagetiflora* (Don, in Bot. Reg. t. 591); but the involucre and pappus, and scales of the receptacle are very different, unless the figure strangely misrepresents these parts, and in all essential characters it agrees well with the third subgenus of Helianthus of Lessing (Leighia of Cassini). The florets of the circumference are destitute of pappus, those of the centre have six serrated scales, and two opposite, very long, subulate, and hispid bristles. The scales of the receptacle are very long and rigid, keeled on the back.

Fig. 1. Lower portion of a radiate Floret. 2. Floret from the Disk. 3. Scale of the Involucre. 4. Inner view of the Stigma. 5. Fruit from a Floret of the Disk:—*magnified.*

Miss Young del.
Pub by S Curtis Glazenwood Essex Jan.y 1.1834.
Swan Sc.

(3296)

CLEOME DENDROIDES. TREE-LIKE CLEOME.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—CAPPARIDEÆ.)

Generic Character.

Cal. 4-sepalus. *Pet.* 4, subadscendentia, basi nectarifera. *Stam.* perigyna submonadelpha subinæqualia. *Siliqua* stipitata vel sessilis. *Spr.*

Specific Character and Synonyms.

CLEOME *dendroides ;* frutescens velutino-pubescens subviscosa aculeata, caule simpliciusculo parum ramoso, foliis 7-foliolatis, foliolis lanceolatis subacuminatis utrinque sub-20-nerviis, floribus atropurpureis, petalis reflexis, filamentis thecaphoroque longissimis divaricatis.

CLEOME dendroides. *Schultes Syst. Veget. v. 7. p. 28.*
CLEOME arborea. *Weinm. Syllogep. 227. (non Humb.) Spreng. Syst. Veg. v. 2. p. 123.*
CLEOME arborea. *(Humb. Bonpl. et Kunth) D C. Prodr. p. 238 ?* Schreib.
CLEOME atro-purpurea ? *Schott in Schæib. Natarf. p. 129.* u

Though the colour of the flowers is rather singular than brilliant, this is a very striking plant, with its curious candelabrum-like flower-spike, and handsome foliage. It was raised from seeds imported in 1828 from the Brazils, by Mrs. PENFOLD of the Achada, to whose liberality I am indebted for its having been several years an inmate of my own garden. Miss YOUNG has, in the narrow space of an octavo plate, admirably expressed all the leading characteristics of a plant, which would require a folio, to display it to advantage.

For the first two years, this CLEOME has quite the appearance of an annual or biennial, herbaceous plant; rising with a single, erect stem to the height of from one to two or three feet, and producing, in the summer of the second year, a single, terminal spike of flowers. But after this, it puts forth one or two branches below the first spike; and the stem becomes more woody, brown, and decidedly shrubby: yet, even in this state, the plant attains no greater height than four or five feet, has seldom above two or three straggling branches at a time, (the rest dying away)

away) and rather bears the aspect of an herbaceous plant, become by accident perennial, than of a really shrubby one: and, in fact, it rarely lasts altogether more than four or five years.

Descr. Whole plant densely clothed with short pubescence, and slightly viscous. *Stem* round, about an inch in diameter at the base, dividing, at about a yard high, into two or three straggling, simple, or rarely subdivided branches, which are naked below, clothed with leaves only towards the ends, in a terminal tuft or crown. *Stipules* minute, at first obsolete, hardening gradually into a pair of small, short, slightly recurved prickles: these, however, fall off on the lower parts of the branches or stem. *Petioles* four to six inches or more long, often purplish like the upper part of the stem and ribs of the leaves, round, or but slightly channelled above. *Leaflets* usually seven, sometimes five, rarely six, eight, or nine; soft, flaccid, pubescent, of a dark, dull green above, paler beneath, with prominent, simple nerves; lanceolate, subacuminate, and often slightly waved: the middle leaflet four or five inches long and two broad; the side ones gradually smaller and broader in proportion; the extreme ones not above an inch or two long. *Raceme* of *flowers* terminal, erect, produced out of the tuft of leaves, finally a foot or more long, having in strong plants a very handsome candelabrum-like appearance. *Bracteas* simple, ovate, sessile, concave, almost cucullate, thickly clothing the main stem of the raceme: the lower ones compound and petioled, and thus gradually passing into leaves. *Flowers* large and singular, of a dark, dull, atro-purpureous colour, fœtid, with the very unpleasant smell of cabbage-water. *Pedicels* round, about an inch or an inch and a half long. *Calyx* of five unequal, narrow, lanceolate, acuminate sepals. *Buds* oblong, obtuse. *Petals* four, imbricate in the bud; before their full expansion the filaments protrude in the shape of a bow, having a very singular appearance; the petals when expanded are reflexed, somewhat twisted or rolled together into a sort of cornucopia shape; in weak or unhealthy plants, and towards the end of the raceme in strong ones, often mottled more or less with a paler or whitish hue; their claw very short. *Torus* ovate or oblong. *Stamens* six, soon deciduous, leaving a white scar on the dark-purple torus. *Filaments* very long, (two or three inches,) divaricate, smooth, dark purple. *Anthers* small. *Pollen* bright yellow; presently whitish or gray. *Thecaphore* round, dark purple, pubescent, about two inches long; bearing at the end the purplish, downy, small *ovarium*, which gradually, after the petals and stamens have fallen, grows into a straight, one-celled, oblong, somewhat inflated, compressed, pod-shaped, pubescent *capsule*, two inches long and half an inch broad, with a deep, broad notch at the top, in the middle of which appear the remains of the stigma, shorter than the two pointed, short beaks between which it is placed. This seed-vessel, which is, in short, a genuine *siliqua*, with only the central dissepiment obsolete or wanting, splits vertically from the base upwards into two concave valves, each of which separates from the upper and lower seminiferous ribs (placentæ) which run along the whole length of each suture, and are persistent; appearing at the base like a fork of the thecaphore, but again uniting at the apex. *Seeds* numerous, in a double (upper and inferior) row, along each of the two rib-like placentæ; small, brown, roundish, flattened, curiously echinated like the husk of a Spanish Chestnut (Castanea *vesca*, W.), all round the back. *Rev. J. T. Lowe.*

Fig. 1. Pod. 2. Seed.

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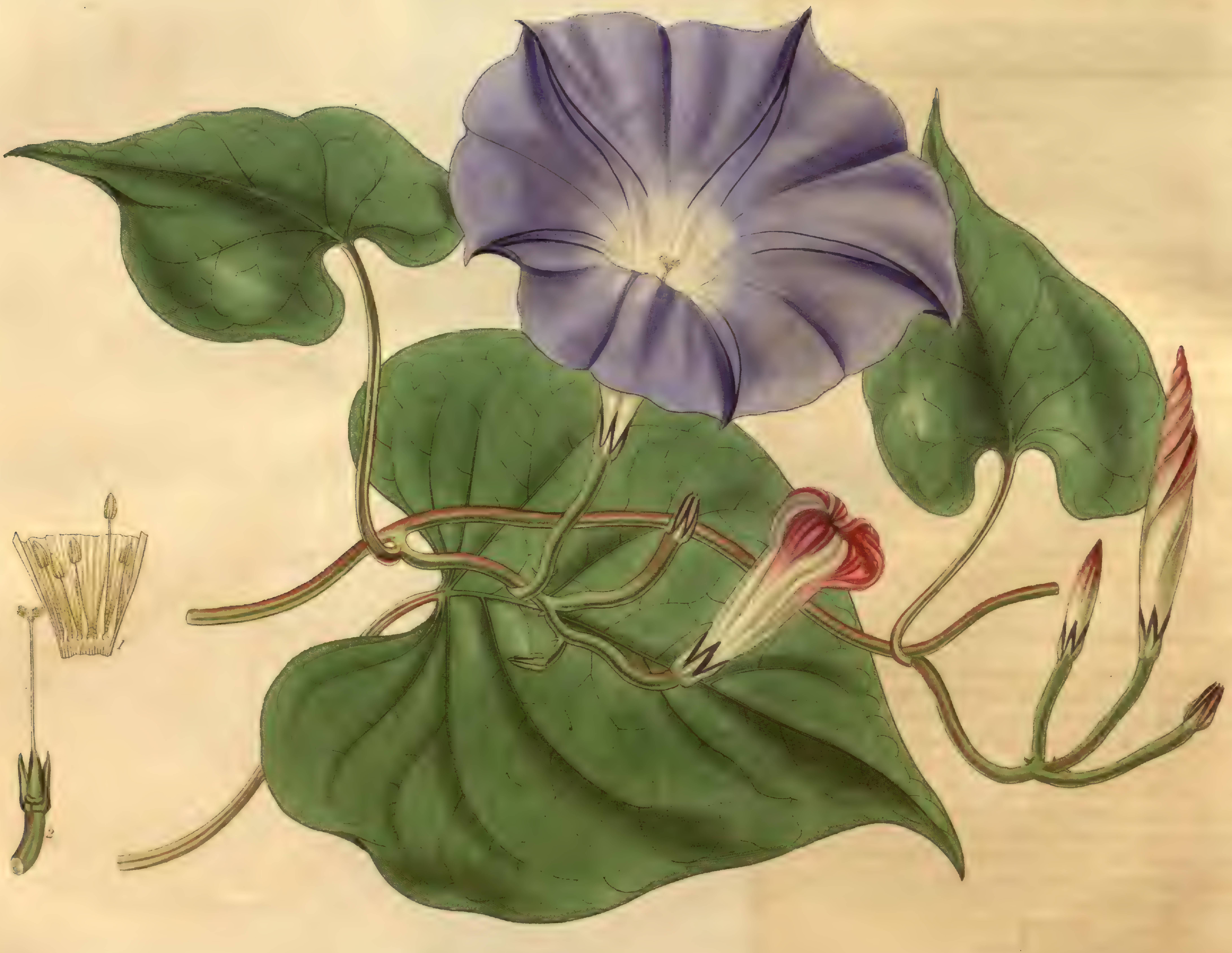

J. D. C. Sowerby del.ᵗ

Pub. by S. Curtis Glazenwood Essex. Feb.ʸ 1. 1834.

Swan sc.

IPOMÆA RUBRO-CÆRULEA. REDDISH-BLUE IPOMÆA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CONVOLVULACEÆ.)

Generic Character.

Cal. 5-partitus, nudus. *Corolla* campanulata v. infundibuliformis, 5-plicata. *Ovarium* 2—3-loculare, loculis dispermis. *Stylus* indivisus. *Stigma* capitatum, 2—3-lobum. *Capsula* 2—3-locularis.—Herbæ *volubiles, quandoque erectæ.* Folia *indivisa v. lobata, nunc pinnatifida.* Semina *in quibusdam comosa. Br.*

Specific Character.

IPOMÆA *rubro-cærulea;* glabra, foliis longe petiolatis profunde cordatis brevi-acuminatis, pedunculis 3—4-floris incrassatis subracemosis, calycis glabri laciniis (parvis) erectis appressis lineari-subulatis albo-marginatis, corolla ampla infundibuliformi, limbo 5-angulato angulis mucronatis, stigmate bilobo.

Of the Genus IPOMÆA, as distinguished from CONVOLVULUS, no less than one hundred and sixty-five species are described in ROEMER and SCHULTES. The species which compose it are chiefly inhabitants of the tropics, and remarkable for the beauty of their flowers, which, though they be individually short-lived, are succeeded so rapidly by others that there are few more showy ornaments of the forests in warm countries, or of the stoves in our own; provided there be space enough devoted to the great extent of their stems and branches. They are rendered valuable too, by the peculiar and well-known properties of some of them. One species, I. *Jalapa,* yields the Jalap of the shops, one of the most useful of medicines; whilst another, the I. *Batatas,* or *Sweet Potato,* is as important an article of food in the tropics, as the Potato is in Europe. In our collections, the beauty of the flowers has been the chief recommendation of these plants: but there are, perhaps, few, if any, that can equal in this respect the one now under consideration; for the opportunity of figuring which, we are indebted to JOHN ALLCARD, Esq. of Stratford Green, Essex, in whose stove and that of his neighbour, Miss LOXLEY, plants have been in flower the last two months. Mr. ALLCARD informs us that the seeds were collected by Mr. SAMUEL RICHARDSON, (an officer in the Anglo-Mexican Mining Association) in the province of Guanaxuato, in Mexico, and were by him presented to J. D. POWLES, Esq. of Stamford Hill, who liberally distributed them.

DESCR. A twining, glabrous plant, with rounded, herbaceous *branches,* tinged with purple. *Leaves* alternate, membranous, palish-green, truly cordate, with a deep and broad sinus at the base, shortly but sharply acuminated, quite entire, wavy on the surface, much veined, situated on petioles about equal to them in length. *Peduncles* axillary, bearing three to four flowers, somewhat racemose, the *pedicels* thickened. *Calyx* five-partite, the segments small, erect, and appressed, linear-subulate, brownish-purple with a pale almost white margin. *Corolla,* in bud, white, with the *limb* of a rich lake red, which, when the flower is fully expanded, becomes of a fine purplish blue, with five angles and five plicæ, the angles mucronate. *Filaments* unequal in height, inserted at the base of the tube, hairy at the base. *Anthers* oblong, yellow. *Germen* oblong. *Style* filiform. *Stigma* two-lobed.

Fig. 1. Section of the base of the Corolla. 2. Calyx, with two of the Segments taken away to show the Germen.

3298.

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EPIDENDRUM NOCTURNUM. NIGHT-SMELLING EPIDENDRUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala patentia, subæqualia. *Petala* sepalis æqualia, v. angustiora, rarius latiora, patentia v. reflexa. *Labellum* cum marginibus columnæ omnino vel parte connatum, limbo integro v. diviso, disco sæpius calloso, costato v. tuberculato; nunc in calcar productum ovario accretum et cuniculum formans. *Columna* elongatum, clinandrio marginato, sæpe fimbriato. *Anthera* carnosa, 2—4-locularis. *Pollinia* 4, caudiculis totidem replicatis annexa.—Herbæ *Americanæ epiphytæ, caule nunc apice v. basi pseudobulboso, nunc elongato apice folioso.* Folia *carnosa, rarissime venis elevatis striata.* Flores *spicati, racemosi, corymbosi, v. paniculati, terminales v. laterales. Lindl.*

Specific Character and Synonyms.

EPIDENDRUM *nocturnum;* foliis distichis oblongis obtusis coriaceis, flore solitario terminali, sepalis petalisque linearibus acuminatis patentibus, labelli trilobi lobis lateralibus ovatis integerrimis intermedio setaceo brevioribus, caule superne valde compresso.

EPIDENDRUM nocturnum. *Linn. Sp. Pl. p.* 1349. *(Jacq. Amer. p.* 225. *t.* 138.*) Spreng. Syst. Veget. v.* 3. *p.* 736. *Lindl. Gen. et Sp. Orchid. p.* 105. *Lodd. Bot. Cab. t.* 713.

EPIDENDRUM *nocturnum* was so named, its original describer tells, because, though scentless during the day, at

night (like many other plants of a greenish or yellowish-white colour) it yields a very powerful odour, which he compares to that of the White Lily. To us, even by day, there is a faint smell resembling Cucumber. Though a native of Martinique, Jamaica, and, probably, many other of the West Indian Islands, it does not appear to have been long introduced to our gardens, since it has no place in the Hortus Kewensis; and it has been figured only in Loddiges' Botanical Cabinet of all our Botanical periodical publications. At the Glasgow Botanic Garden, we received plants of it from Messrs. Shepherds of Liverpool, which flowered in November, 1833.

Descr. *Stems* about a foot high, much compressed upwards, leafy, bearing four to five elliptical, oblong, coriaceous, almost veinless, obtuse, or even retuse leaves. From the extremity of the stem arises a single flower, or if more, (according to Mr. Loddiges) they follow each other in succession. *Sepals* and *petals* almost exactly resembling each other, linear-acuminate, patent, very long, and of a pale, greenish-yellow colour. *Labellum* white, with two yellow glands at the base, attached to the cylindrical, elongated, pale yellowish-green column, three-lobed, the two lateral lobes ovate, obtuse, quite entire, and in part closing over the extremity of the column, intermediate lobe very long and setaceous. At the extremity of the column are two lateral and one dorsal serrated processes, within which the *anther* is sunk: this is hemisphærical, white, fleshy, compressed, with two teeth in front, and a deep furrow on the top, so as to appear didymous. *Cells* four, their margins brown and membranaceous.

Fig. 1. Back view of the Column and Labellum. 2. Labellum separated from the Column. 3. Extremity of the Column. 4. Inside view of the Anther-Case. 5. Pollen-Masses:—fig. 2—5. *magnified.*

3299.

W. J. H. del.   Pub. by S. Curtis Glazenwood Essex, Feby. 1. 1834.   Swan Sc

ONOPORDUM ARABICUM. ARABIAN COTTON THISTLE.

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Class and Order.

SYNGENESIA ÆQUALIS.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum favosum. *Pappus* capillaris. *Calyx* imbricatus, squamis mucronatis.

Specific Character and Synonyms.

ONOPORDUM *Arabicum;* caule elato, foliis subtomentosis late decurrentibus sinuato-dentatis spinosis, involucri squamis ovato-lanceolatis mucronato-spinosis appressis.

ONOPORDUM Arabicum. *Linn. Sp. Pl. p.* 1159. *Jacq. Hort. Vindob. t.* 149. *Willd. Sp. Pl. v. 3. p.* 1689. *Spreng. Syst. Veget. v. 3. p.* 387.

Notwithstanding that this very stately plant has been cultivated in England (by Mr. JOHN RAY) even before the year 1686, no figure, that I am aware, has been given of it by any British author: and among foreign ones, there is scarcely any except a very indifferent representation in the Hortus Vindobonensis of JACQUIN. In Botanic Gardens, and in those of the curious, it is now and then met with. Probably its harsh texture and spinous foliage and involucres have tended to expel it from the pleasure-ground; but these very circumstances have recommended it to the northern inhabitants of our island: and, forgetting that their national emblem should be an aboriginal native of the country, they point it out to the stranger in their cottage gardens as the "*Nemo me impune lacessit.*" It is a native of Arabia, we presume, as its name implies, as well as of the warmer parts of Europe generally, and by the Spaniards was, no doubt, along with the CYNARAS or Artichokes, introduced to Buenos Ayres, where it perhaps constitutes a part of the forest of Thistles, which Capt. HEAD has described in so lively a manner. The specimen here figured is from a plant ten feet high, which Mr. MACKAY raised at the Dublin College Botanic Garden from seeds, sent in 1832, by Mr. TWEEDIE, from Buenos Ayres: it flowered in the autumn, and continued in perfection till the latter end of November. It is quite hardy, and is esteemed a biennial.

DESCR. *Stem* very tall, fistulose, deeply winged by the decurrent leaves, hoary, as is the whole plant, with lax tomentum; *branches* numerous, short, erect. *Leaves* ovato-lanceolate, a foot and more long, sinuated at the margins, wavy and spinous, reticulated, gradually smaller upwards and more lanceolate, their decurrent bases also spinous. *Flowers* terminal, and solitary upon the branches. *Involucrum* almost conical, of numerous imbricated and appressed, rigid, spinous, ovato-lanceolate scales, of a greenish-purple colour, connected with a cobwebby substance. *Florets* numerous, very equal in height, spreading in the circumference, long and slender: the *tube* whitish; the *limb* purple, erect. *Anthers* easily separating, linear, with a long, slender appendage at the extremity. *Style* purple. *Laciniæ* of the *Stigmas* combined. *Germen* obovato-oblong, four-sided, smooth. *Pappus* of many, rather short, scabrous hairs, united at the base. *Receptacle* very cellular, the margins of the cells laciniated.

Fig. 1. Cells of the Receptacle. 2. Floret. 3. Portion of the Style and Stigma. 4. Extremity of the Corolla, showing the tops of the anthers, surrounding the style:—*magnified.*

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2

[illegible]

(3300)

CEROPEGIA LUSHII. MR. LUSH'S CEROPEGIA.

* * *

Class and Order.

PENTANDRIA DIGYNIA.

(Nat. Ord.—ASCLEPIADEÆ.)

Generic Character.

Calyx 5-partitus. *Corolla* basi ventricoso tubo infundibuliformi, limbi laciniis conniventibus ligulatis. *Corona staminea* duplex (?); interioris foliolis lobis exterioris opposita. *Antheræ* apice simplices. *Folliculi* cylindracei, læves. *Semina* comosa.—Suffrutices *vel* Herbæ *volubiles. Wight.*

Specific Character and Synonyms.

CEROPEGIA *Lushii;* volubilis, glabra, foliis lineari-acuminatis carnosis canaliculatis, corollæ tubo basi inflato-globoso, limbi 5-fido laciniis linearibus hirsutis approximatis, lobis coronæ stamineæ exterioris lunulato-emarginatis interioribus alternantibus, interioris elongatis cylindraceo-filiformibus erectis flexuosis exteriori multo longioribus.

CEROPEGIA Lushii. *Graham in Ed. New Phil. Journ. ined.*

The Genus CEROPEGIA is peculiar to the East Indies, and is remarkable for the peculiar shape of the flowers, frequently arranged in umbels, hence its name *κηροπηγιον,* a candelabrum, or lamp-stand. Many of them are possessed of considerable beauty, and highly ornamental to the bushy and uncultivated places where they grow. The species too are esculent, and used by the natives either raw or stewed in curries. Of one species, C. *bulbosa,* the root resembles a small turnip, no less in appearance than in flavor, according to Dr. ROXBURGH; and its leaves taste like purslane. The present species is certainly among the least beautiful, and was communicated from Bombay by Mr. LUSH to the Edin-

burgh Botanic Garden, where it flowered in October last. Dr. WIGHT has pointed out its great affinity, especially in the structure of the flowers, with the C. *acuminata* (ROXB. Corom. v. 1. t. 8.); the chief difference being in the leaves; here narrow, thick, and fleshy, exhibiting no trace of veins; there broader, not fleshy, and throwing out lateral veins from the costa.

DESCR. Whole plant slightly glaucous. *Stems* and *branches* slender, twining. *Leaves* opposite, linear and acuminate, two to four inches long, sessile, fleshy, with a furrow on the upper side. *Flowers* in pedunculated, axillary *umbels*, shorter than the leaves, each of three to four flowers. *Calyx* of five deep, linear segments. *Corolla* yellow-green, tinged with purple, the *tube* much inflated, the *limb* of five, linear, erect, and connivent segments, deep purple and hairy within. *Organs of fructification* on a short stipes, which supports a double crown: outer of five patent, lanceolate, fleshy segments, alternating with the five inner ones, which are much elongated, cylindrical, or filiform, erect, flexuose, diverging upwards.

Fig. 1. Flower. 2. Column of Fructification.

Dr. WIGHT has requested me to correct the following errors in the description of CEROPEGIA *Wightii* at folio 3267 of this Magazine. At the beginning of the third paragraph, the words " exterior" and " interior" are transposed; it should have been stated, that the interior lobes are twice as long as the exterior.—In the Generic Character, line first, for " *lobo*" read *tubo*."

3301.

Honble. Miss Norton delt

Pub. by S. Curtis Glazenwood Essex

Swan sc.

OPUNTIA CYLINDRICA. ROUND-STEMMED PRICKLY PEAR.

* * *

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—CACTEÆ.)

Generic Character.

Sepala numerosa, ovario adnata, foliiformia, summa plana brevia, intima petaliformia obovata rosacea expansa, tubo supra ovarium nullo. *Stamina* numerosa petalis breviora. *Stylus* cylindricus basi constrictus. *Stigmata* plurima, erecta, crassa. *Bacca* ovata, apice umbilicata, tuberculata, sæpius spinifera. *Embryo* subspiralis, teretiusculus. *Cotyledones,* semiteretes, germinantes foliaceæ planæ crassæ. *Plumula* crassa.—Frutices, *trunco demum tereti, juniore ramisque rarissimis cylindricis sæpius plus minus compressis articulatis, articulis ovatis aut oblongis fasciculos aculeorum aut setarum ordine quincunciali seu spirali dispositos gerentes.* Folia *sediformia caducissima subquoque fasciculo.* Flores *e fasciculis aut marginibus articulorum orti, flavi aut rubentes.* Stamina *tactu subirritabilia.*

Specific Character and Synonyms.

OPUNTIA *cylindrica ;* erecta subramosa, caule ramisque cylindricis subsimplicibus tuberculosis areolato-sulcatis tuberculis rhomboideo-oblongis, folia caduca spinasque subulatis fasciculatis basi lanuginosis apice gerentibus, floribus subterminalibus subparvis, petalis erectis abbreviatis coroniformibus, stylo æquali s. filiformi.

OPUNTIA cylindrica. *De Cand. Prodr. v. 3. p.* 471.

CEREUS cylindricus. *Haw. Syn. Succ. p.* 183.

CACTUS cylindricus. *Lam. Dict. v.* 1. *p.* 539. *Spreng. Syst. Veget. v.* 2. *p.* 495.

I am indebted to the Honorable Miss NORTON for a most admirable and truly artist-like drawing of this species of Prickly Pear, which was originally introduced into England in 1799, but has never flowered in Britain, the inflorescence being unknown to every author who has described the species. Thence it was sent to Madeira. It is truly intermediate

mediate between *Cereus* and *Opuntia;* having the filiform style and habit of the former, with the tubeless flowers of the latter. The bony, compact, central mass of seeds, (not diffused through the flesh, but distinct and separate,) is different from any thing I have observed in either of these genera: but the number of species which have fallen under my observation, is far too limited to justify more than a suggestion whether this character may prove corroborative of Professor DE CANDOLLE'S idea that the present plant with its allies may hereafter form a distinct Genus.

DESCR. *Stems* several, cylindrical, scarcely erect without some support when full grown: the main one six feet high or more, about two inches in diameter throughout, with a few, distant, erect or ascending, thickish branches, placed irregularly, subdivided; when young, rather club-shaped, always very obtuse: the whole of a dark dull green (except the lower part of the stem, which is ash-coloured or brownish,) and thickly armed with fine, sharp, but not very long, pale or white, finally divaricating *spines*, growing in fascicles of two or three on the branches, five or six on the stem, out of the top of each of the oblong or subpyriform tubercles, which are arranged spirally and quincuncially with beautiful regularity round the branches. At the base of the spines is a large, diffuse tuft of very short, white, cottony bristles, filling up the channel or hollow above the top of each of the tubercles. *Leaves* deciduous, half an inch long, cylindrical, acute, like those of some *Sedums*. *Flowers* several together just below the ends of the branches, rather small and inconspicuous, about an inch in diameter, scarlet. *Tube* none. *Petals* short and erect, forming a sort of upright coronet, about half an inch high, at the top of the large, spirally tubercled germen, remote from the pistil; in seldom more than two rows; the *outer* row more fleshy, narrow, acute, closing over the inner ones in the bud in a beautifully regular, rose-like or stellate manner; *inner* row thinner, much larger and broader, rounded or retuse. *Stamens* numerous, incurved. *Pistil* an inch long. *Style* slender, of nearly equal diameter throughout, or not conspicuously swollen downwards as in the true OPUNTIÆ, pale green, hollow and pinkish within. *Stigma* just overtopping the anthers, of about eight, erect, linear-lanceolate, or oblong, acute, pale green lobes. *Germen* large, spirally tubercled and setaceo-spinose, like the stem, but the tubercles are much shorter and broader; oblong-obovate, deeply umbilicate at the top. *Ovary* containing many *ovules*, placed high up adjoining the bottom of the cup-like hollow of the germen. *Fruit* oval, subtruncate at each end, with the hollow at the top remarkably deep; about two inches long and one across; pale yellowish-green, generally more or less discoloured with pale ashy brown, seemingly from some disease of the epidermis, the tubercles obsolete, or as if worn down into broad, flat, rhomboidal areolæ, as well as the tufts of bristles. *Flesh* hard, pale-greenish, insipid, but disagreeably viscous with a nauseous, fishy smell. *Seeds* roundish-angular, much more convex than usual, or even globose, but of all shapes from compression, very closely packed into a hard, dense, bony, compact mass in the centre of the fruit, as large as a small marble; each seed about two or three lines in diameter. *Rev. J. T. Lowe.*

Fig. 1. Lower part of the Stem. 2. Upper part of ditto. 3. Vertical Section of the Germen and Flower, through the Pistil and Ovary. 4. Part of the Style and Stigma, split open. 5. Leaf. 6. Seed. 7. Diminished sketch of the whole plant.—Fig. 4—6 ***magnified.***

W. J. H. del.   Pub. by S. Curtis Glazenwood Essex   Feb 1. 1834   Swan sc.

KENTROPHYLLUM ARBORESCENS. ARBORESCENT KENTROPHYLLUM.

* * *

Class and Order.

SYNGENESIA ÆQUALIS.

(Nat. Ord.—COMPOSITÆ. DIV. CINAROCEPHALÆ.)

Generic Character.

Involucrum ventricosum imbricatum, squamis interioribus cartilagineis apice ciliato-spinosis, exterioribus foliaceis pinnatifidis bracteas simulantibus. *Filamenta* barbata. *Semina* tetragona hilo laterali receptaculo adfixa. *Pappus* paleaceo-pilosus. *D C.*

Specific Character and Synonyms.

KENTROPHYLLUM * *arborescens ;* subpubescens inferne lignosum, foliis inferioribus elongato-lanceolatis amplexicaulibus reticulatis superioribus ovato-acuminatis nervosis omnibus sinuato-spinosis, involucri basi foliacei squamis ovatis laxis spinoso-dentatis interioribus ciliatis.

CARTHAMUS arborescens. *Linn. Sp. Pl. p.* 1164. *Willd. Sp. Pl. v.* 3. *p.* 1711.

CARTHAMUS rigidus. *Willd. En.—et* C. hircinus *Lag.* (according to SPRENGEL.)

ONOBROMA arborescens. *Spreng. Syst. Veget. v. 3. p. 391.*

This, Mr. MACKAY observes, to whom we are indebted for the opportunity of figuring it, " is a singular and very ornamental plant of its tribe, and has stood out of doors in the Dublin College Botanic Garden for the last two winters, in a sheltered border, flowering freely in Autumn, and throw-

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* From κεντρον, a *spine*, and φυλλον, a *leaf*, in allusion to the spiny leaves.

ing out many lateral shoots from its woody stem. Both flowers and leaves have an agreeable, musky smell. I raised it from seeds sent me many years ago from the South of Spain, by our late esteemed friend, Dr. SHUTER, when on his way to England from Madeira, before he went to India." Its lively yellow flowers nestled among the bright green foliage were in perfection to the very latter end of November, when our figure was taken.

I refer this plant to KENTROPHYLLUM, *Neck.*, on account of its great affinity with the K. *lanatum* of DE CANDOLLE, CARTHAMUS *lanatus*, L. (Saf-flower), which is, however, an annual plant, and densely woolly. From the true CARTHAMUS (*tinctorius*, L.) it differs in the presence of a pappus, and of a tuft of hairs on the filaments; from ONOBROMA, GÆRT., *Carduncellus*, HALL., with which SPRENGEL has united it, chiefly in the yellow (not blue or purple) flowers.

DESCR. Perennial; lower part of the *stem* woody, a little downy above, striated. *Cauline leaves* eight or ten inches long, lanceolate or linear-oblong and acuminated, amplexicaul at the base, reticulated with veins, and having a broad pale costa, upper ones, or those of the branches shorter, much more rigid, ovato-lanceolate, acuminate with longitudinal nerves connected by transverse veins: all of them sinuated and spinous. *Flowers* large, handsome, terminal, solitary. *Florets* yellow. *Filaments* with a beautiful yellow tuft of hairs. *Style* very long: segments of the *stigma* combined. *Pappus* placed within an elevated rim of the germen, composed of flat, paleaceous bristles fringed at the margin, the outer ones being the shortest. *Paleæ* of the receptacle setose, white.

Fig. 1. Floret. 2. Portion of the three Anthers and Filaments. 3. Paleæ of the Receptacle. 4. Portion of a Bristle of the Pappus:—*magnified.*

Young del.

Pub. by S. Curtis. Glazenwood Essex Feb.y 1. 1834

Swan Sc.

CHRYSOPHYLLUM MONOPYRENUM. DATE-SHAPED, OR DAMASCENE-PLUM, STAR-APPLE.

* * *

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—SAPOTEÆ.)

Generic Character.

Calyx quinquepartitus, parvus, foliolis subrotundis obtusis persistentibus. *Corolla* campanulata brevis, limbi laciniis 5 subrotundis patentissimis, tubo brevioribus. *Filamenta* tubo imposita conniventia. *Stylus* brevissimus, *stigmate* obtuso subquinquefido. *Bacca* globosa, 10-locularis, magna, seminibus solitariis osseis compressis, cicatricula notatis, nitidis.

Specific Character and Synonyms.

CHRYSOPHYLLUM *monopyrenum;* foliis ovalibus breviter acuminatis supra nitidis subtus aureo-sericeis parallelonervosis, pedicellis sparsis axillaribus terminalibusque aggregatis, fructibus drupaceis monospermis ovato-oblongis dactyliformibus.

CHRYSOPHYLLUM monopyrenum. *Swartz, Fl. Ind. Occ. v.* 1. *p.* 480. *Rœm. et Schultes, v.* 4. *p.* 703. *Spreng. Syst. Veg. v.* 1. *p.* 666.

CHRYSOPHYLLUM oliviforme. *Lam. Encycl. v.* 1. *p.* 552.

CHRYSOPHYLLUM Cainito. β. *Mart. Mill. Dict. No. I. (excl. Syn.)—Burm. Pl. Amer. t.* 69.

Miss YOUNG has kindly favoured me with a beautiful drawing, in which she has represented, with her usual ability, all the leading characteristics of this tree, with its changes of foliage and fruit. The flowering branch was drawn in March; the fruit added in the following August, from the same individual tree, which grows on the lawn in

front of the Quinta do Valle, in the immediate neighbourhood of Funchal. Other smaller and younger trees occur also in several gardens under the name of Star-Apple, agreeing in every particular with this.

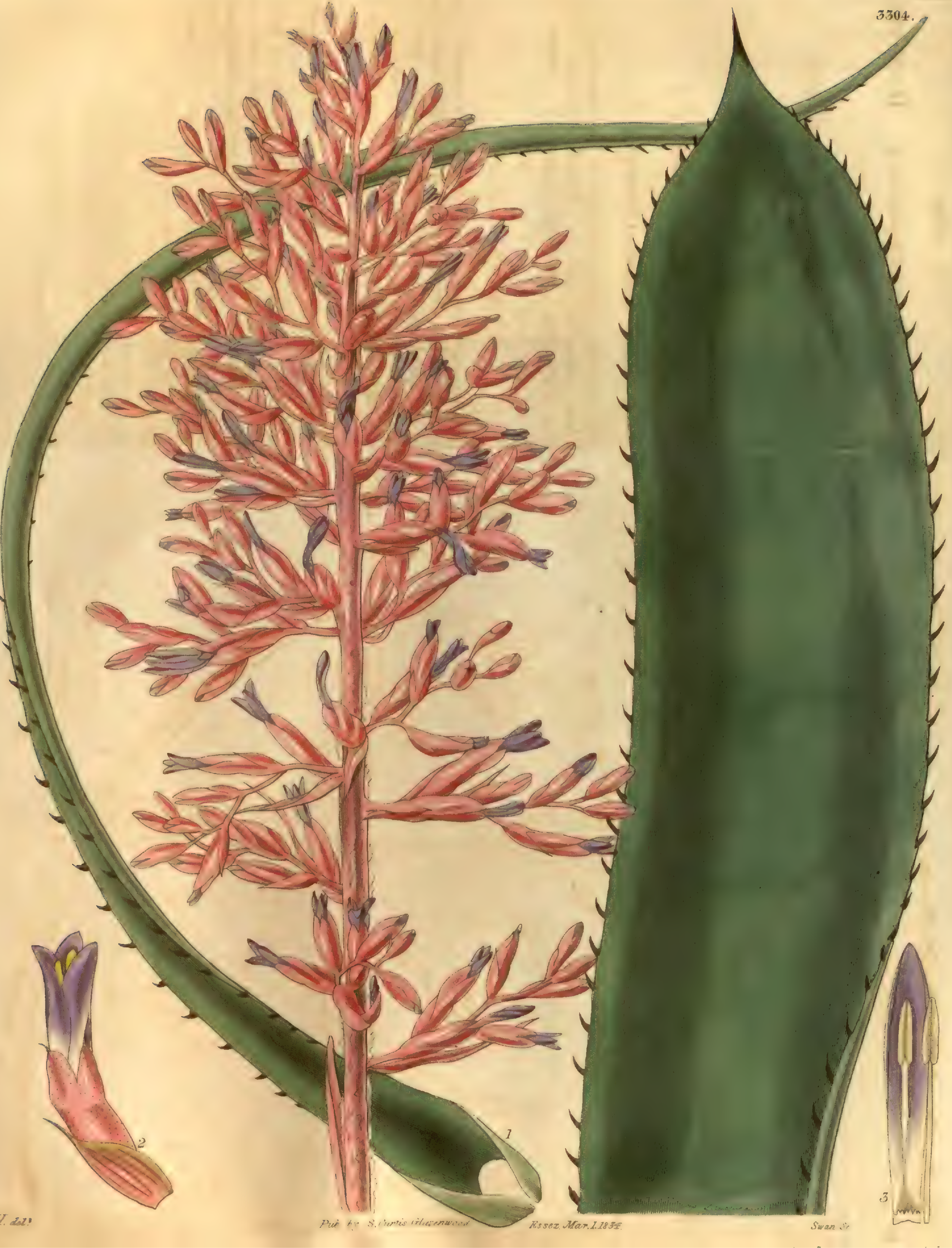
The fruit is insipid, yet not absolutely disagreeable; being tolerably juicy and sweet, with something of an astringent, fig-like flavour. It is, however, by no means good enough to render the tree worth cultivation apart from other motives.

The flowers appear before the fruit is quite over in August, and continue in succession till the following March. The fruit, which is always produced in great abundance, ripens in the succeeding July and August; but is deservedly held in very low esteem in Madeira.

This species of Star-Apple, which was introduced to the conservatories of Britain in 1812, forms, in Madeira, a rather elegant evergreen tree, about thirty feet high, with a *trunk* not exceeding a foot in diameter, covered with a cracked and roughish, but otherwise pretty even or equal ash-coloured bark. The head is thick, close, and bushy in the middle, but not of a regular formal shape; and the outer branches, projecting into the air with a certain fan-shaped regularity, have a very light and elegant appearance, when seen from beneath, in relief against the sky. The general aspect and shape of the whole somewhat resembles a fine young, vigorous Hawthorn tree. Terminal or young leaf-bearing branchlets growing out in a regular, flattened, horizontal, fan-like form; as if they had been regularly trained against a wall: densely clothed with a coat of ferruginous adpressed hairs, which easily rub off, and ultimately disappear. Young *leaves* clothed on both sides with similar hairs, which disappear from the upper surface in a short time. *Petioles* short, about half an inch long, densely ferrugineo-pubescent. All parts of the tree while young are milky when cut or broken. *Leaves* alternate, oval, approaching to oblong, four or five inches long, and two broad; shortly acuminate, sometimes retuse, entire, with simple, parallel, equidistant, inconspicuous nerves; above, when adult, smooth and shining; beneath beautifully sattiny, with pale, ferruginous, close-pressed, silky hairs; the midrib and nerves deeper ferruginous than the rest. Before they fall, the leaves turn to a beautiful deep, rich red, variously marbled or mottled with yellow or white. *Pedicels* axillary, all along, and at the ends of the branchlets, and even coming out here and there on the older, thicker branches; aggregated, very irregular in number, shorter than the petioles, round, densely ferrugineo-pubescent. *Flowers* very small, scentless. *Buds* globose, ferrugineo-pubescent. *Calyx* of five, or often six, rarely four, rounded, imbricated *sepals;* the two or three outer ones densely ferrugineo-pubescent. *Corolla* subcampanulate, pale greenish or yellowish white, clothed outside with shining close-pressed hairs of the same colour; *tube* longer than the calyx; the *limb* in five or often six, rarely four, shallow, ovate, obtuse, patent, subrevolute lobes. *Stamens* as many as the sepals, very short, opposite the lobes, inserted at their base in the throat of the tube. *Filaments* shorter than the lobes, flattened, thick. *Ovarium* ovate, ferrugineo-pubescent. *Style* very short and thick, smooth and greenish, round. *Stigma* of as many lobes as there are stamens or sepals. *Fruit* a shining, purplish-black, ovato-oblong *drupe,* about an inch long and half an inch broad, narrowed, and almost pointed at the top, but otherwise much resembling a Date in figure; tipped with the dry remains of the short style, and cupped at the base by the persistent calyx. The surface is thinly sprinkled with short adpressed hairs, but is glossy and shining. It abounds in a viscid milk. The outer skin *(Epicarp)* is quite thin and membranaceous: the flesh *(Sarcocarp)* is scarcely above a line thick, dark purplish-black, full of milk. *Seed* always single, large, bony, enveloped with a very thin and membranous, closely adhering, but easily stripped off skin; about three-fourths of an inch long, and three to four lines broad, hard, bony or shelly, elliptic, pointed at each end, but particularly at the base, smooth, glossy, dark brown, divided by longitudinal grooves into generally five, but sometimes six unequal compartments like pannels; and with a large, rough, oblique, uneven, whitish scar at the base, nearly half the length of the whole seed. One of the compartments is both broader and longer than the others; reaching the whole length of the seed: the other four or five are terminated by the scar. *Testa* brittle. *Episperm* a dry, silvery, pale skin, lining the testa, and scarcely attached, except about the radicle, to the kernel. *Albumen* fleshy, enclosing all round the two fleshy *cotyledons* and inferior radicle, forming more than half the whole mass of the kernel, which is altogether intensely bitter, almost acrid, and abounding in oil.

Fig. 1. Flower, open, and fig. 2, Pistil, *magnified.* 3. Ripe Fruit. 4. Seed, inverted, *natural size.*

3304.



W. J. H. del.

Pub. by S. Curtis Glazenwood Essex. Mar. 1. 1834.

Swan Sc.

(3304)

BILLBERGIA PURPUREO-ROSEA. ROSE-PURPLE BILLBERGIA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—BROMELIACEÆ.)

Generic Character.

Calyx superus. *Petala* convoluta, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula* baccata ? *Semina* nuda. *Lindl.*

Specific Character.

BILLBERGIA *purpureo-rosea ;* foliis erecto-patulis ligulatis atro-viridibus brevi-acuminatissimis spinoso-dentatis scapo paniculato multifloro brevioribus, exterioribus paucis subulato-canaliculatis, bracteis floralibus solitariis foliolisque calycinis ovatis mucronatis roseis, corollis longe exsertis.

Among the remarkable features in a tropical forest are the numerous and beautiful species of plants which attach themselves parasitically to the trunks of trees, investing the stems and branches, and adorning them with adventitious flowers and foliage. The chief of these are the ORCHIS and BBOMELIA, or *Pine-Apple*, families. Our plant belongs to the latter of these, a groupe of vegetables, which not only affords the most richly-coloured blossoms, accompanied by foliage armed with exceedingly annoying spines ; but one of the choicest of productions for our desserts :

> "Her luscious fruit Ananas rears,
> Amidst a coronet of spears ;"

and according to the information of our scientific travellers, a truly refreshing beverage in the water that collects in the hollows formed by the inflated leaves, and which is eagerly sought after in times of drought by the natives of those hot countries.

Our present plant will perhaps yield in beauty to few of its tribe. It is a native of Brazil, was introduced by that zealous cultivator, Mrs. ARNOLD HARRISON, and flowered for the first time, I believe, in this country, last year in the Liverpool Botanic Garden; and again in November of the present year (1833), when the specimen here figured was kindly sent by Mr. HENRY SHEPHERD.

DESCR. *Leaves* a foot and a half or more long, ligulate, with a short but very pungent acumination at the extremity, the base very concave, the margin armed with strong dark brown, spinous teeth pointing forward: a few outer *leaves* are shorter than the rest, subulate and channelled: the colour is a dark green, exhibiting, however, exceedingly minute, farinaceous scales, when seen under the microscope. In the centre of these, from one to three *scapes* arise, which are longer than the leaves, of a reddish-purple colour, shaggy with white loose down, and bearing several oblong, membranaceous *bracteas*, of which, the lower ones are convolute. *Panicle*, or compound *raceme*, eight to ten inches long, bearing numerous rose-coloured *flowers;* the *petals* alone being purple. Each *branch* bears seven or eight flowers on its zigzag *rachis*, and is subtended by a lanceolate, membranaceous, withered *bractea* or *spatha*. Each flower too, has a convolute, obtuse bractea, rose-coloured, downy, striated and terminated by a sharp, black mucro. *Germen* and *calyx* downy, the latter of three ovate, segments, tipped with a black mucro. *Petals* oblong-lanceolate, very bright and deep purple, with a scale at the base within. Three of the stamens are free, the other three half way combined with the petal.

Fig. 1. Outer Leaf: *nat. size.* 2. Flower. 3. Petal and Stamens: *magnified.*

Miss Young del!

Pub. by S. Curtis, Glazenwood, Essex. Mar 1. 1834

Swan sc.

Ficus comosa. Comose, or Tufted Fig.

* *

Class and Order.

Polygamia Diœcia.

(Nat. Ord.—Urticeæ.)

Generic Character.

Receptaculum carnosum, clausum, apice pervium, androgynum. *Flosculi* pedicellati. Masc. 3-partiti. *Stam.* 1—3. Fæm. 3—8-partiti. *Stylus* lateralis bifidus. *Semina* in pulpa receptaculi nidulantia. *Spreng.*

Specific Character and Synonyms.

Ficus *comosa;* foliis integerrimis glaberrimis nitidis coriaceis subaveniis oblongo-ellipticis utrinque acuminatis subtrinerviis, receptaculis geminis sessilibus obovato-globosis obsolete verruculatis basi tribracteatis.

Ficus comosa. *Roxb. Corom. Pl. v. 2. t.* 125. *Roem. et Schultes, Syst. Veget. v.* 1. *p.* 506. *Spreng. Syst. Veg. v.* 3. *p.* 781.

Three or four beautiful trees of this species of *Fig* form a noble groupe, in front of the Quinta das Angustias, in Madeira, a little out of Funchal to the westward, on the way to the Loo rock or Ilheo. They were originally brought from England (where, according to the Hortus Britannicus, the species was introduced from the Circars, in 1808), in a box, which being placed here, and afterwards neglected, the plants soon extended their roots into the ground, and established themselves, forming a grove-like screen to the whole east front of the house, which is of considerable extent. In this situation, conspicuous from the whole bay or amphitheatre of Funchal, they fail not to attract the attention of the most incurious stranger, by their waving, drooping, tufted masses of dark, rich foliage; to which the epithet comose or tressy is most appropriately applicable.

The beautiful drawing, admirably representing the gracefully pendent habit of the foliage, is from the pencil of my obliging friend, Miss Young.

Descr. A most elegant *tree*, about forty feet high, with gracefully waving, subpendulous, tressy masses of dark rich evergreen, shining foliage. *Trunk* rather slender, scarcely above a foot in diameter, soon dividing into numerous spreading, or even declining *branches*, covered (like the trunk) with a light brown, smooth, even *bark*, spotted with minute white *lenticellæ*. *Branches* slender, bearing crowded, conglomerate masses of *leaves* towards their ends, on numerous, short, paniculated subdivisions or branchlets; thus forming dense tress-like tufts of foliage, subpendulous by their own weight, over the whole outer circumference of the tree; while the inside is an open sort of shady vault of naked branches. *Young shoots* compressed or angular, sparingly milky. *Stipules* narrow, acuminate, soon turning reddish-brown, deciduous at the expansion of the leaf; before this forming a short, slender-pointed, horn-like termination to each branchlet. *Petioles* pale green, flattened, slightly channelled above, a quarter or one-third of an inch long. *Leaves* very smooth and shining, dark green above, pale beneath, coriaceous and thickish, entire, with a sharp, thin, pellucid edge; faintly three-nerved at the base, but both nerves and veins scarcely visible; oblong or elliptic, attenuated slightly at both ends; at the apex often somewhat abruptly so, but not acute; from one and a half to two, or even three inches long, and from an inch to an inch and a half wide: the whole leaf, when held up to the light, is found to be very closely and minutely but faintly, punctate. *Receptacles (Figs)* obovato-globose, small, the size of large peas, or about one-third of an inch in diameter; produced singly, or more generally in pairs, from the axils of the petioles on the terminal branchlets; each sessile, and clasped at the base by three short, fleshy, ovate, rounded, close-pressed *bracteas*, of a pale yellowish waxy or brownish colour, and very thick and fleshy at their base, with the edges thin and entire. *Figs* pale greenish, inclining to white in the spring; of a beautiful rosy wax-colour in the summer and autumn, when fully ripe; but even then hard, quite dry, and tasteless; their inside chaffy, white or pale yellowish; their flesh, a mere leathery, milky skin. They remain always closed, with a dark brown or purple mark at the top: their surface is even, but sprinkled with obsolete white or pale warts. When in pairs, the figs are placed back to back, divaricating one on each side the branch or petiole. They first appear in January or February, and continue till August or September. *Female florets* pedicellated, growing amongst long, narrow, acuminate, chaffy, white scales. *Petals* three, oval, very obtuse or rounded, embracing the *ovarium*. *Style* lateral, perhaps bifid; but if so, the two *stigmas* are so curled and twisted together as to look like a simple one. *Male florets* trifid, the divisions more acute than in the female. I have never met with more than a single, apiculate *stamen*, bearing just below the summit a two-celled, large, white *anther*, with divaricate cells or lobes. *Seeds* irregularly oval, subangular, white, shining; the size of those of Ficus *Carica*, L. The male florets are scarcely found till late in the season, or when the seeds are ripe. *Rev. J. T. Lowe.*

Fig. 1. Branch with ripe Figs. 2. A pair of Figs. 3. Single Fig. 4. A female Floret, with one of the chaffy Scales at the base of the Receptacle. 5 and 6. Male Florets, all but f. 1, more or less *magnified*.

3306.

W. J. H. del.

Pub. by S. Curtis, Glazenwood, Essex Mar. 1.1834

Swan Sc.

ORNITHIDIUM ALBUM. WHITE ORNITHIDIUM.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium clausum, liberum, æquale. *Labellum* cum basi columnæ connatum, cucullatum, disco callosum. *Columna* labello parallela, teretiuscula, rostello brevissimo. *Anthera* bilocularis. *Pollinia* 2, bipartibilia, lobis incumbentibus; in glandulam parvam triangularem sessilia.—Herba *epiphyta caulescens.* Caules *ramosi, pseudobulbos axillares gerentes.* Folia *subsericea.* Racemi *sessiles, axillares, effusi. Lindl.*

Specific Character.

ORNITHIDIUM *album;* floribus sessilibus, perianthii laciniis oblongis obtusis (albis), labello trilobo lobo medio obtuso disco glanduloso, glandula rugosa basi setosa.

Notwithstanding the important labours of Mr. BROWN and Professor LINDLEY among the Orchideous plants, new forms are continually presenting themselves, which I find a difficulty in referring satisfactorily to their proper Genera. Such is eminently the case with the plant now under consideration. Its habit is altogether that of ORNITHIDIUM *coccineum,* the only hitherto known species of the Genus, and the structure of the flower is essentially the same. Yet, again, it has a very close affinity with the CAMARIDIUM *ochroleucum,* LINDL. in Bot. Reg. t. 844 (CYMBIDIUM *ochroleucum,* LINDL. Gen. et Sp. Orch. v. 1. p. 168); so much so, that on looking at the figure, one would almost pronounce the two to be identical; but the able author observes, that " the genus (CAMARIDIUM) is principally dis-

tinguished from Ornithidium, by not having the labellum united with the base of the column; nor a connivent perianth, nor a fleshy disk to the labellum; and is especially characterized by its small labellum and expanded perianth." Very similar to our plant, again, is the Dendrobium *album*, Hook. Ex. Fl. t. 142, (Maxillaria *alba*, Lindl.) of which Professor Lindley observes, "facies *Ornithidii*:" but the germen is very much elongated and exserted, and the labellum is entire.

Ornithidium *album* is a native of Trinidad, whence it was sent to the Glasgow Botanic Garden by Mr. David Lockhart, along with a very accurate drawing by Mr. J. Lockhart. It flowered in November, 1833.

Descr. *Stem* much elongated, branched, compressed, clothed, except at the extremity of the branches, where it bears tufts of linear *leaves*, with the withered bases of former years' leaves, and bearing, from the side, *bulbs*, which have a single deciduous *leaf*. *Flowers* rather large, white, sessile, solitary, or (according to Mr. Lockhart's drawing) two or three from the same point among the upper recent leaves; the *germen* and part of the flower immersed in membranous, sheathing *bracteas*. *Perianth* white: the *segments* connivent, equal, oblong, obtuse, concave. *Labellum* shorter than the perianth, erect, oblong, three-lobed; *lobes* rounded, obtuse, lateral ones involute, terminal one yellow within: in the inferior part of the disk is a large, wrinkled, yellow gland, having at its base a tuft of appressed, coarse, yellowish setæ. *Column* semicylindrical, white. *Anther* conical, compressed at the sides. *Pollen-masses* four, roundish, attached to a nearly square gland.

Fig. 1. Side view of the Labellum. 2. Inside view of ditto. 3. Gland of the base of the Labellum, with the tuft of Hairs at the base. 4. Column. 5. Pollen-masses:—*magnified*.

W. J. H. del.

Pub. by S. Curtis, Glazenwood Essex. Mar. 1. 1834.

WESTRINGIA CINEREA. ASH-COLOURED WESTRINGIA.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Cal. semiquinquefidus, 5-gonus. *Corollæ* labium superius planum, bifidum: inferius tripartitum, æquale. *Stamina* 4, distantia: duo superiora antheris polliniferis, dimidiatis: inferiora antheris bipartitis, cassis.—Frutices *eglandulosi, sæpius tomentosi* (Rosmarini facie). Folia *verticillata, integerrima.* Flores *axillares, solitarii, bibracteati, albi, purpureo nunc punctati. Br.*

Specific Character and Synonyms.

WESTRINGIA *cinerea;* foliis ternis linearibus patentibus mucronatis margine revolutis, adultis utrinque calycibusque cinereis, dentibus tubo 4—6-ies brevioribus. *Br.*

WESTRINGIA cinerea. *Br. Prodr. v.* 1. *p.* 301. *Spreng. Syst. Veget. v.* 2. *p.* 712.

WESTRINGIA (named by Sir J. E. SMITH in compliment to a Swedish Botanist, author of an ingenious work on the dyeing properties of *Lichens,*) is exclusively a New Holland Genus, having a good deal the habit of the *Rosemary,* of which eight species were collected and described by Mr. BROWN, two of them natives of Port Jackson, one of the tropical shores of New Holland, and two of Van Diemen's Land. Most of them, therefore, require the protection of a greenhouse, heath soil, and a very moderate supply of water.

The present species is a very desirable one for cultivation, and was discovered by Mr. BROWN on the south coast of Australia, and afterwards was met with by Mr. ALLAN CUNNINGHAM on Dirk Hartog's Island, and on the western shore of the main land, and by him introduced to the Royal Garden at Kew in 1822. From that rich collection it was, along with the following species, communicated by Mr. AITON, in October, 1833, together with some notes from Mr. CUNNINGHAM.

DESCR. A much-branched, low, and straggling *shrub. Leaves* numerous, patent, mostly ternate, linear, grooved in the centre, the margins recurved, very minutely downy, so as to give an ashen hue above, the underside downy and white. *Flowers* solitary, from the axil of a leaf, sessile. *Calyx* slightly downy like the leaves, with five small *teeth* and five angles, and with two appressed small *bracteas* at the base. *Corolla* with a *tube* scarcely longer than the corolla : *upper lip* plane, bifid, very hairy, pale purple with deep purple spots ; *lower lip* three-partite, the segments linear-oblong, nearly glabrous, with a few yellow and purple spots at the base. *Stamens* two, perfect : *Filaments* hairy below, swollen and apparently with a joint above : *Anther* one-celled, edged with purple : *Pollen* white :— There are besides two short, sterile filaments, with two recurved points (abortive cells.) *Germen* slightly four-lobed. *Stigma* bifid.

Fig. 1. Flower. 2. Perfect Stamen. 3. Imperfect ditto. 4. Pistil. 5. Calyx including a Pistil :—*magnified.*

W. J. H. del.
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Swan Sc

WESTRINGIA DAMPIERI. DAMPIER'S WESTRINGIA.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Cal. semiquinquefidus, 5-gonus. *Corollæ* labium superius planum, bifidum: inferius tripartitum, æquale. *Stamina* 4, distantia: duo superiora antheris polliniferis, dimidiatis: inferiora antheris bipartitis, cassis.—Frutices *eglandulosi, sæpius tomentosi* (Rosmarini facie). Folia *verticillata, integerrima.* Flores *axillares, solitarii, bibracteati, albi, purpureo nunc punctati. Br.*

Specific Character and Synonyms.

WESTRINGIA *Dampieri;* foliis quaternis linearibus margine revolutis, adultis supra glabriusculis subtus calycibusque cinereis opacis, dentibus tubo dimidio brevioribus. *Br.*

WESTRINGIA Dampieri. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 301. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 573. *Spreng. Syst. Veget. v.* 2. *p.* 712.

This is even a more desirable species than the subject of our last plate for cultivation in the greenhouse, and very distinct from it; being, indeed, more allied to the original species of Sir JAMES SMITH, from Port Jackson, W. *rosmarinifolia.* It is indigenous to the sandy shores of King George's Sound, and has been an inhabitant of Kew Gardens, whence our specimens were derived, ever since the year 1803. It flowers in October.

DESCR. A low *shrub,* with glabrous, brown, rounded, generally opposite *branches. Leaves* in whorls of four, linear, obtuse, the margins revolute, glabrous, glossy and dark green above, pale and almost white or glaucous beneath. *Flowers* solitary from the axils of numerous crowded, terminal leaves, which are smaller than the rest. *Calyx* campanulate, angled, with two small bracteas at the base, slightly downy, five-cleft, the teeth sharp, a little patent. *Corolla* large, white, hairy; *upper lip* quite without spots; *lower* with yellow and purple spots at the base of the segments. *Stamens* as in W. *cinerea*. *Germen* of four, rounded lobes, seated on a yellowish gland. *Style* slender, white: *Stigma* bifid.

Fig. 1. Flower. 2. Calyx including its Pistil. 3. Pistil. 4. Leaf: *magnified.*

3309.

Dr Greville del. Pub. by S. Curtis, Glazenwood Essex Mar. 1 1834 Swan Sc.

FRANCOA SONCHIFOLIA. SOW-THISTLE-LEAVED FRANCOA.

****

Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—GALACINEÆ. *Don.*)

Generic Character.

Calyx 4-partitus, persistens. *Petala* 4. *Stamina* 8, fertilia, totidem sterilia minuta cum iis alternantia. *Germen* 4-sulcatum. *Stigma* sessile 4-lobatum. *Capsula* 4-loba, 4-locularis, polysperma. *Semina* angulo interiori loculorum inserta.

Specific Character and Synonyms.

FRANCOA *sonchifolia ;* caulescens, foliis lyratis decurrentibus lobis distantibus ala sinuata sursum angustata conjunctis, racemo spicato erecto, pedunculo pedicellisque pubescentibus. *Grah.*

FRANCOA sonchifolia. *Juss. in Ann. des Sc. Nat. v.* 3. *p.* 192. *t.* 12. *Spreng. Syst. Veget. v.* 2. *p.* 262. *Don in Edin. Phil. Journ.* 1828.

LLANPANKE amplissimo sonchifolio. *Feuill. Journ. v.* 1. *p.* 742. *t.* 31.

PANKE sonchifolia. *Willd. Sp. Pl. v.* 2. *p.* 487.

This species is at once distinguished from FRANCOA *appendiculata* (see tab. 3168 of this work) by the presence of a stem ; the flowers being very similar. In describing F. *appendiculata* (Edinburgh New Phil. Journal, June 1832,) I made, though doubtfully, the same reference to the Annales des Sciences Naturelles as is given above ; but I now believe the absence of stem in the single specimen to which JUSSIEU had access, to have arisen from the plant having flowered when young. No. 826 of CUMING's Herbarium, which seems to me, on several accounts, a very distinct species, has the foliage of F. *appendiculata*, yet a decided stem. The subject of the present plate is a large branching plant, and, in the greenhouse of Mr. Neill, produced flowers in succession during the greater part of July and August. It was first raised by Mr. Menzies, Halifax, Yorkshire, from seeds sent from Chili.

Descr. *Stem* erect, two feet and a half high, rather shrubby, succulent and slightly downy above, round. *Leaves* lyrate, waved, downy on both sides, bright green, semi-amplexicaul, decurrent for a little way, lobes blunt, waved, toothed. *Peduncles* axillary and terminal, greatly elongated, round, downy, branched; the *branches* springing from the axil of a diminished leaf. *Raceme* spiked, erect, very long and handsome. *Pedicels* rising from the axils of lanceolate, entire *bracteas*, and rather shorter than them, downy, spreading when in fruit. *Flowers* sub-erect. *Calyx* four- to five-cleft, as long as the peduncle, downy, persistent. *Corolla* of four or five *petals*, spreading, more than twice as long as the calyx. *Petals* spathulato-oblong, lilac-coloured, darker in the centre. *Stamens* eight to ten, equal to the calyx in length, alternating with an equal number of much shorter sterile *filaments*. *Stigma* four- to five-lobed, sessile, peltate, spreading, attached to the apex of a central column, lobes blunt. *Germen* oblong, four- to five-sided, four- to five-celled, deeply furrowed between the lobes, which project upwards in acute angles around the stigma; *ovules* very numerous; *receptacle* central. *Capsule* elongated, erect, septicidal. *Seeds* oblong, testa remarkably wrinkled. *Graham.*

I am sorry that I cannot concur with my valued friend, Dr. Graham, in considering this species of Francoa different from F. *appendiculata*. My own observations lead me entirely to believe that they are mere varieties of the same species.

W. J. H. delt

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Swan Sc

MONARDA FISTULOSA; (flore maculato).

FISTULOSE MONARDA; spotted flowered.

****

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Calyx tubulosus, elongatus, 15-nervis, subæqualis, 5-dentatus, intus fauce villosa vel rarius subnuda. *Corolla* tubo exserto vel incluso intus glabro vel pubescente exannulato, fauce subdilatata, limbo bilabiato, labiis linearibus oblongisve subæqualibus, superiore erecto integro vel emarginato, inferiore patente apice breviter trifido lobis lateralibus ovatis obtusis, medio angustiore oblongo retuso emarginato. *Staminum superiorum rudimenta* subnulla, *fertilia (inferiora)* 2 adscendentia, e labio superiore corolla sæpius exserta. *Filamenta* ad faucem corollæ inserta, edentula. *Antheræ* lineares subbiloculares loculis divaricatis confluentibus, margine connatæ. *Stylus* apice subæqualiter bifidus. *Stigmata* minuta, terminalia. *Achænia* sicca, lævia.—Herbæ, *foliis integris plerumque dentatis crenatisve.* Flores *in verticillastris paucis densissimis glomerati, bracteis suffulti.*

Specific Character and Synonyms.

MONARDA *fistulosa;* foliis petiolatis ovato-lanceolatis basi rotundato-subcordatis utrinque glabris pubescentibus hispidisve, floralibus sessilibus bracteisque exterioribus subcoloratis, calycibus subincurvis vix coloratis fauce intus hispida, corollis glabris villosisve. *Benth.*

MONARDA fistulosa. *Linn. Sp. Pl. p.* 32. *Roem. et Schultes, Syst. Veget. v.* 1. *p.* 211. *Spreng. Syst. Veget. v.* 1. *p.* 55. *Reich. Ic. Bot. v.* 2. *t.* 172. (floribus coccineis.) *Benth. Lab. v.* 1. *p.* 316. *Curt. Bot. Mag. t.* 145? (fide Benth.)

M. allophylla. *Mich. Am. v.* 1. *p.* 16.

M. purpurea. *Pursh, Fl. Am. v.* 1. *p.* 17.

M. undulata. *Reich. Ic. Bot. v.* 2. *t.* 180. (floribus purpureis.)

M.

M. altissima. *Reich. Ic. Bot. v.* 2. *t.* 170. (floribus roseis purpureo-maculatis.)

M. affinis. *Reich. Ic. Bot. v.* 2. *t.* 182. (floribus purpureis maculatis.)

M. media. *Willd. Enum. Sw. Br. Fl. Gard. v.* 1. *t.* 98.

M. oblongata *et* M. rugosa. *Ait. Hort. Kew. ed.* 2. *v.* 1. *p.* 51.

β. *mollis;* foliis molliter pubescentibus, corollæ labio superiore densius barbato. *Bent.* l. c.

M. mollis. *Linn. Amœn. Acad. v.* 3. *p.* 399. *Reich. Ic. Bot. v.* 2. *t.* 171.

M. menthæfolia. *Graham in Edin. N. Phil. Journ.* 1829. *et in Bot. Mag. t.* 2958.

The above is a list of ten, out of twenty-one different names which have been ascertained by Mr. BENTHAM to have been given to this species of MONARDA. The same able author refers the M. *fistulosa* var. of CURT. in Bot. Mag. t. 146, (but with a mark of doubt,) to M. *didyma*, L. (Bot. Mag. t. 546,) from which our plant is at all times distinguished by its taller stems, by the calyces and bracteas being less coloured, the corollas smaller and more or less pubescent, and especially, by the mouth of the calyx being set and often closed with hairs. Mr. BENTHAM reduces the Genus MONARDA to the two species now mentioned, M. *Bradburiana*, BERK., M. *Russelliana* (Bot. Mag. t. 2513), M. *punctata*, and M. *aristata*.—M. *ciliata*, LINN. together with M. *hirsuta*, PURSH, (M. *ciliata*, MICH.) now constituting the Genus BLEPHILIA. All are natives of North America: M. *fistulosa* having a geographical range of great extent, from Canada to the Gulph of Mexico: the variety *mollis*, as observed by Mr. BENTHAM, being found chiefly in the northern, the *α*. chiefly in the southern regions.

The plant here figured, with pale rose-coloured flowers spotted with deep purple within, and to which we shall confine our description, was sent from New Orleans, by Mr. DRUMMOND, to the Glasgow Botanical Garden, and flowered in the open air in the summer of 1833.

DESCR. *Stem* between two and three feet high, four-sided, slightly downy, generally hollow. *Leaves* opposite, upon short foot-stalks, ovate acuminate, often deflexed, very obscurely downy, coarsely and remotely serrated, slightly waved, the upper pair oblong-lanceolate. *Bracteas* few, ovate, foliaceous, entire, the apex reflexed. *Head of flowers* rather large. *Calyces* very densely crowded, linear-oblong, curved, striated, purplish; the *limb* of five sharp subulated teeth, the mouth closed with connivent white hairs, as in THYMUS. *Corolla* about an inch long, arcuate, pale rose-coloured, downy without. *Upper lip* linear, entire, hairy towards the extremity; lower one three-lobed, middle lobe elongated; the whole upper side spotted with deep purple. *Anthers* purple.

Fig. 1. Flower. 2. Calyx. 3. Stamens:—*magnified.* 4. Bractea, *nat. size.*

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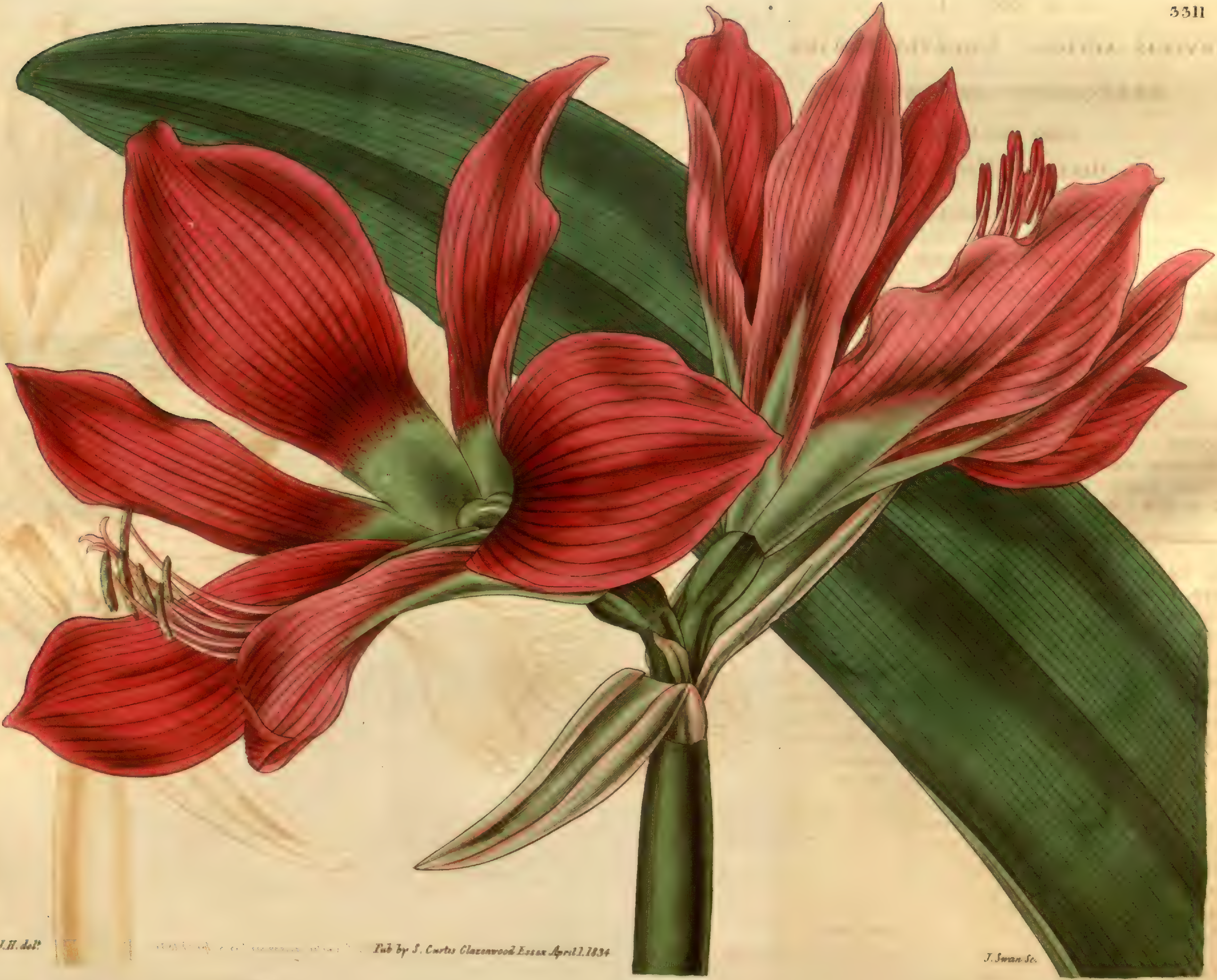

W.J.H. del.

Pub by S. Curtis Glazenwood Essex April 1. 1834

J. Swan Sc.

AMARYLLIS AULICA. COURTLY AMARYLLIS.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Corolla 6-partita, subregularis v. ringens, fauce nuda vel squamis coronata. *Stamina* declinata v. recta. *Capsula* trilocularis. *Spr.*

Specific Character and Synonyms.

AMARYLLIS *aulica;* ringens, biflora, tubo subnullo, faucis corona contracta triangulari, lacinia ima limbi inferne involuta, staminibus declinatis inclusis.

AMARYLLIS aulica. *Ker. in Journ. of Sc. and the Arts, v.* 2. *p.* 353. *Ker, in Bot. Reg. t.* 444.

The AMARYLLIS *aulica* seems liable to much variation: we have represented a splendid variety (t. 2983) with green lines in the centre, running nearly the whole length of each petal, with a very obsolete glandular disk, and with long, narrow, glaucous leaves. Another variety is the *platypetala* of Professor LINDLEY in the Bot. Register, t. 1038; while our present plant seems intermediate between these and what is considered the type of the species, the original A. *aulica* of Mr. KER; bordering so closely upon the latter, however, as scarcely to deserve to be considered a variety. The chief differences are, that in our plant, the petals are less sharply acuminate and the base of the petals is of a darker green. The bulb was presented to the Botanic Garden by — PEARSON, Esq. who brought it from the neighbourhood of Rio Janerio, in Brazil, where it is a native.

DESCR. The *bulb* is large and coated. The *leaves* moderately long and broadly strap-shaped, full green, not at all glaucous, closely striated, the *apex* rather obtuse.

Scape a foot, or a foot and a half high in our plant, rounded, glabrous, not glaucous. *Spatha* of two oblong, membranaceous *leaves,* whose sides are involute, two-flowered. *Pedicels* short. *Germen* inferior, trigonal. *Flowers* large, extremely handsome; *Petals* unequal, obovate, sharply acuminated, patent, striated, within of a rich crimson, green at the base, and above the green is a dark blotch of red-purple; externally paler. *Gland* in the bottom of the flower, from which the stamens and style rise, much enlarged, angular, with a dark edge: aperture triangular. *Stamens* declined, scarcely so long as their petals. *Filaments* red, yellow-green at the base. *Anthers* oblong, versatile, deep purple when young, at length covered all over with green *pollen.* *Style* rather longer than the stamens: *Stigma* trifid.

W. J. H. del.

Pub. by S. Curtis. Glazenwood Essex. Apr 1. 1834.

Swan Sc

Alyxia ruscifolia. Butcher's-broom-leaved Alyxia.

Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Apocyneæ.)

Generic Character.

Corolla hypocrateriformis, fauce nudâ. *Stamina* inclusa. *Ovaria* 2, oligosperma. *Styli* subcohærentes. *Stigma* obtusum. *Drupæ* 2, (alterâ nunc abortiente,) pedicellatæ, simplices, monospermæ, v. catenatim compositæ, putamine semibiloculari! *Semen* semibipartitum! *Albumen* ruminatum! corneum. *Embryo* erectus.—Arbusculæ *v.* Frutices *glabri, lactescentes.* Folia *verticillata v. opposita, coriacea, compacta, sempervirentia.* Flores *axillares v. terminales, quandoque spicati, inter minores, albi sæpè suaveolentes. Br.*

Specific Character and Synonyms.

Alyxia *ruscifolia*;* floribus subsessilibus terminalibus, foliis quaternis ternisve lato-ellipticis v. elliptico-lanceolatis acutis mucronatis: mucrone spinescenti, venis acutangulis, paginis marginibusque scabriusculis, stigmate apice truncato penicillato.† *Cunn.*

Alyxia ruscifolia. *Br. Prodr. Fl. Nov. Holl. v.* I. *p.* 470. *Rœm. et Schultes, Syst. Veget. v.* 4. *p.* 439. *Spreng. Syst. Veg. v.* 1. *p.* 835. *Lodd. Bot. Cab. t.* 1811. *Loudon, Hort. Brit. p.* 67.

Alyxia Richardsoni. *Sweet in Loudon Hort. Brit. p.* 67.

(β.) pugioniformis *(Cunn. MSS. Ann.* 1828,*)* foliis angusto-lanceolatis mucronatis.

" The Generic title, Alyxia, was originally proposed by Sir Joseph Banks and Dr. Solander to be applied to certain plants of Apocyneæ, discovered by themselves during the first voyage of circumnavigation and discovery of the immortal Cook. With all the habit and structure of flower

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* From αλυξις, *grief, anxiety of mind,* in allusion to the deep sombre green of several of the Genus.

† In the plate, the Stigma ought to have been represented with a small tuft of hairs at the extremity. *W. J. H.*

of the true Apocyneæ, it differs from the other Genera of that Order having baccate or subdrupaceous fruits, in the shape of its seed, in its ruminated albumen, and in its erect embryo; and in these two last particulars, it accords with Anonaceæ. In some of the species, the stigma is certainly more or less pencil-formed or bearded at its apex, which is one of the characters on which Forster had founded his Genus Gynopogon; but Mr. Brown, who examined the stigmas of eleven species, and found that organ, in the greater number, perfectly smooth, has adopted the original name of *Alyxia*, from Solander's MSS., rather than that of Forster, who, it may be here stated, previous to his departure on Captain Cook's second Voyage, had free access to the Banksian Herbarium, and was therefore well aware that the Genus, to which his particular voyage furnished probably but a single new species (the one he discovered on Norfolk Island) had been previously given and characterized by the very eminent Naturalists above named. The present species was detected many years after, in New South Wales, within the tropic, to which, however, its geographical range is not limited, for upon a settlement being established, some nine years since, at Moreton Bay, on the same line of coast, but in 27° S. latitude, it was found in the dense woods that clothe the banks of the Brisbane River, growing luxuriantly amidst great shade and but little light; yet, under these circumstances, bearing its flowers at the termination of each branchlet, throughout the cooler season of the year. It was originally raised at Kew, from seeds gathered on those intertropical shores, in 1820; and from the Royal Gardens, other collections were enriched by it. It is a hardy conservatory plant, ornamental from its habit and dark foliage, and putting forth its fragrant, white flowers (smelling like Jasmine) freely, and generally during the greater part of autumn, is well worthy of a place in every collection." *A. Cunningham.*

Descr. A low *shrub*, with somewhat verticillate or umbellate, erect *branches*, clothed with a grey-brown *bark*. *Leaves* almost always quaternate, spreading, elliptical-lanceolate, nearly sessile, with a long pungent point, striated obliquely with veins, glossy and dark green above, pale and yellower below. *Flowers* solitary, or two to three together, terminal or axillary, sessile, small, but exceedingly fragrant, smelling like Jasmine. *Calyx* small, five-partite, the segments erect, linear-lanceolate, slightly downy at the margin; at the base are a few small appressed scales. *Corolla* with the *tube* elongated, fulvous-brown, swollen above the middle: *limb* yellowish white, the *segments* ovato-obtuse, at length reflexed, yellowish white, the orifice very small. *Germen* roundish, ovate, with a deep furrow on the two opposite sides. *Style* straight, much shorter than the tube. *Stigma* capitate.

Fig. 1. Flower. 2. Calyx and Pistil: *magnified.*

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W. J. H. del. Pub by S. Curtis Glazenwood Essex April 1 1834 Swan Sc.

Alyxia daphnoides. Daphne-like Alyxia.

****

Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Apocyneæ.)

Generic Character.

Corolla hypocrateriformis, fauce nudâ. *Stamina* inclusa. *Ovaria* 2, oligosperma. *Styli* subcohærentes. *Stigma* obtusum. *Drupæ* 2, (alterâ nunc abortiente,) pedicellatæ, simplices, monospermæ, v. catenatim compositæ, putamine semibiloculari! *Semen* semibipartitum! *Albumen* ruminatum! corneum. *Embryo* erectus.—Arbusculæ *v.* Frutices *glabri, lactescentes.* Folia *verticillata v. opposita, coriacea, compacta, sempervirentia.* Flores *axillares v. terminales, quandoque spicati, inter minores, albi sæpè suaveolentes. Br.*

Specific Character and Synonyms.

Alyxia *daphnoides,* floribus sessilibus axillaribus terminalibusve, foliis quaternis obovato-oblongis ellipticis rhomboideisve obtusis lævibus nitidis subtus venosis, stigmate apice breviter penicillato, ramulis strictis tomentosis scabris. *A. Cunn.*

A Shrub of strong growth, inhabiting dry shaded woods on Norfolk Island, where it is by no means of frequent occurrence, and it does not appear to have been noticed as a species, distinct from Forster's plant (A. *Gynopogon*), by that very eminent Botanist and Artist, the late Mr. Ferdinand Bauer, who, during a residence of several months on that isolated spot of the Pacific in the year 1804, carefully prepared a Herbarium of its vegetable productions, as well as drawings of the more remarkable phænogamous species. From A. *Gynopogon,* however, which Forster first collected on that island, this second species differs in being altogether a shrub of a more robust and stiff habit, with rough tomentose branches and broader leaves, the latter of an uniformly thicker texture—circumstances that have been remarked by Mr. ALLAN CUNNINGHAM to continue permanent in the plant, whether in its native woods, or the greenhouse at Kew. The stigma, also, is furnished at its summit with a little pencil-like tuft, whereas that of A. *Gynopogon*, which has been lately most elaborately described by M. ENDLICHER, in his *Prodromus* of the Flora of the island, is perfectly smooth. Living plants of this very distinct, Daphne-looking species, were introduced to the Royal Gardens by Mr. CUNNINGHAM, in 1831, where they soon afterwards flowered, and produced green fruit. It is remarkably hardy, simply requiring protection from frost, and is readily propagated by cuttings.

DESCR. A low *shrub*, with many spreading, wavy, and rather stout, often opposite or verticillate *branches*. *Leaves* quaternate, rarely ternate, oval or obovate, patent, coriaceous, yellowish-green, scarcely veiny. *Flowers* solitary, terminal, white; the *tube* yellowish, swollen above the middle: *limb* of five ovate, spreading, at length reflexed, oblique segments; orifice contracted. *Calyx* small, bracteated, five-partite, the segments appressed. *Stamens* small, inserted into the swollen part of the tube. *Filaments* short, subulate, hairy: *Anthers* sagittate, deep orange. *Germen* roundish-oval, compressed, hairy at the base, with a longitudinal furrow on each side. *Style* much shorter than the corolla. *Stigma* capitate, yellowish.

Fig. 1. Flower. 2. Calyx laid open, showing the Pistil. 3. Part of the Corolla laid open, showing the Stamens:—*magnified.*

Mr. ALLAN CUNNINGHAM has kindly favored me with the following Synopsis of the different species of ALYXIA.

1. A. *actinophylla*; corymbis simplicibus axillaribus pedunculatis, pedicellis 1—3-floris, calycibus ebracteatis, foliis quaternis senis octonisve verticillatis petiolatis elongato-lanceolatis glabris margine revolutis subtus glaucis, venis obtusangulis parallelis, pedunculo dimidium folii æquante, stigmate oblongo membranaceo imberbi, caule arborescenti.

HAB. In Australasiâ, ad oras tropicas; nempè Endeavour River, supra littus orientale, necnon littora septentrionali-occidentalia, Montagu Sound, etc. 1820. *A. Cunningham.* (v. v.)

2. A. *spicata;* spicis axillaribus, floribus verticillatis subsessilibus tribracteatis, foliis ternis ovali-oblongis, petiolis pedunculo brevioribus basi simplici, stigmate subconico breviter barbato.

A. spicata. *Brown Prodr. v.* 1. *p.* 470. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 439. *Spreng. Syst. Veg. v.* 1. *p.* 835.

Hab. In Australasiæ orâ orientali, intra tropicum. 1802. *R. Brown.*—Endeavour River. 1819. *A. Cunningham.* (v. v.)

3. A. *tetragona;* spicis axillaribus, floribus verticillatis subsessilibus tribracteatis, foliis quaternis oblongis, petiolis pedunculo longioribus: basi gibbosâ. *Brown Prodr. v.* 1. *p.* 470.

A. tetragona. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 489. *Spreng. Syst. Veg. v.* 1. *p.* 835.

Hab. In Novâ Cambria Australi, intra tropicum. 1770. *Banks.*—Lizard Island. 1820. *A. Cunningham.* (v. v. absque floribus.)

4. A. *stellata;* umbellis axillaribus pedunculatis folio multo brevioribus, calycibus ebracteatis, foliis ternis lanceolatis subacuminatis obtusiusculis basi attenuatis lævibus, (" stigmate capitato barbato." *Spreng.).*

A. stellata. *Rœm. et Schult. Syst. Veget. v.* 4. *p.* 439. *Spreng. Syst. Veget. v.* 1. *p.* 835.

Gynopogon stellatum. *Forst. Prodr. n.* 117. *Char. Gen. p.* 36. *t.* 18. *Labill. Sert. Caled. p.* 30. *t.* 34. *Willd. Sp. Pl. v.* 1. *p.* 1221. *Pers. Syn. Pl. v.* 1. *p.* 266. *Spreng. Pugill. v.* 1. *p.* 24.

Hab. In Societatis et Amicorum Insulis, Maris Pacifici. 1774. *G. Forster. (v. s. sp. in Herbario D. Lambert.)*

5. A. *obtusifolia;* umbellâ axillari pedunculatâ, calycibus ebracteatis, foliis ternis ovatis obovatisve obtusissimis. *Br. Prodr. v.* 1. *p.* 470. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 439. *Spreng. Syst. Veg. v.* 1. *p.* 835.

Hab. In orâ æquinoctiali Novæ Cambriæ Australis. 1802. *R. Brown.*—Cape Cleveland, Endeavour River, etc. 1770. *Banks.*—1819. *A. Cunningham.* (v. v. absque floribus.)

6. A. *laurina;* pedunculis terminalibus subternis 1—3-floris, calycibus ebracteatis, foliis ternis oblongis acuminatis, acumine rotundato-emarginato, subcoriaceis, stigmate ciliato.

A. laurina. *Gaudich. in Freyc. Voy. p.* 451. *tab.* 62.

Pulassarium verum. *Rumph. Amb.* 5. *p.* 34. *t.* 20. *Gaud.*

Hab. In Insulis Moluccis (Rawak.) 1819. *C. Gaudichaud.*

7. A. *olivæformis;* pedunculis axillaribus solitariis 2—4-floris; foliis ternis elliptico-oblongis utrinque acutis membranaceis, fructibus olivæformibus. *Gaudich. in Freyc. Voy. p.* 451. *n.* 2.

Hab. In Insulis Sandwicensibus. 1819. *C. Gaudichaud.*

8. A. *Torresiana;* pedunculis axillaribus solitariis bifloris petiolum superantibus, foliis ternis ellipticis obtusis subemarginatis, basi in petiolum decurrentibus, fructibus elliptico-subrotundis. *Gaudich. in Freyc. Voy. p.* 451. *n.* 3.

Hab. In Insulis Mariannis. 1819. *C. Gaudichaud.*

9. A. *Gynopogon;* floribus subsessilibus axillaribus terminalibusve solitariis geminatisve, foliis quaternis quinisve obovatis ovato-oblongisve obtusiusculis basi attenuatis lucidis, subtus aveniis, stigmate omnino imberbi, ramulis virgatis glabris.

A. Gynopogon. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 440. *Brown in Wall. Catal. n.* 1650. *Endlicher Prodr. Fl. Norfolk. p.* 58.

A. Forsteri. *Cunn. MSS. anno* 1830.

Gynopogon Alyxia. *Forst. Prodr. n.* 118. *Willd. Sp. Pl. v.* 1. *p.* 1221. *Pers. Syn. Pl. v.* 1. *p.* 266.

Icon. ined. *Ferd. Bauer Illustr. Pl. Norf. t.* 119.

HAB. In sylvis umbrosis subhumidis Insulæ Norfolk. 1774. *G. Forster.*—1804. *Ferd. Bauer.*—1830. *A. Cunningham.* (v. v.)

10. A. *daphnoides.* Tab. nostr. 3313.

HAB. In sylvis dumosis siccatis Insulæ Norfolk. 1830. *A. Cunningham.* (v. v.)

11. A. *ruscifolia.* Vide Tab. nostr. 3312.

HAB. In orâ æquinoctiali Novæ Cambriæ Australis. 1802. *R. Brown.* Cape Cleveland, Endeavour River, etc. 1819; necnon ad ripas fluminis Brisbane, Moreton-Bay, extra tropicum, ubi var. β item crescit. 1824. *A. Cunningham.* (v. v.)

12. A. *scandens;* pedunculis axillaribus trifloris petiolo longioribus, foliis oppositis ovalibus obtusis petiolatis basi subrotundis, venis obtusangulis parallelis, ramulis scandentibus.

A. scandens. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 440. *Spreng. Syst. v.* 1. *p.* 835. *Hook. et Arn. Bot. of Beech. Voy.*

Gynopogon scandens. *Forst. Prodr. n.* 119. *Willd. Sp. Pl. v.* 1. *p.* 1221. *Pers. Syn. Pl. v.* 1. *p.* 266.

HAB. In Insulis Societatis. 1774. *G. Forster.* (v. s. sp. in Herb. Lamb.)

13. A. *buxifolia;* floribus subgeminatis interpetiolaribus, foliis oppositis ovalibus obovatisve obtusis cum apiculo calloso utrinque lævibus aveniis, stigmate leviter barbato.

A. buxifolia. *Brown Prodr. v.* 1. *p.* 470. *Rœm. et Schult. Syst. Veg. v.* 4. *p.* 439. *Spreng. Syst. Veg. v.* 1. *p.* 835.

HAB. In Novâ Cambriâ Australi, omninò extra tropicum: scilicet; ad oram orientalem, Two-fold Bay, in lat. 37 grad. Austr., 1817. *A. Cunningham.*—Ad or. australem, Port Phillip. 1802. *R. Brown.*—Necnon in Insulis freti Bass, Kent's Group. *G. Caley.*—Atque in regionibus septentrionalibus Insulæ Van Diemen. 1804. *R. Brown.* (v. v.)

There are besides, ALYXIA *odorata, Wall.*—A. *calophylla, W.*—A. *lucida, W.*, in Dr. Wallich's List of Plants of the Honorable the East India Company's Museum. *H.*

3314

W J H del.
Pub by S Curtis Glazenwood Essex Apr 1 1834.
Swan Sc.

CALADIUM FRAGRANTISSIMUM. DELICIOUS-SCENTED CALADIUM.

****

Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—AROIDEÆ.)

Generic Character.

Spatha monophylla, cucullata, basi convoluta. *Spadix* ad apicem staminifer, mucrone quandoque nudo, medio glandulosus, basi germinibus tectus. *Antheræ* peltatæ, subpelta ad ambitum multiloculares. *Glandulæ* (stamina sterilia) obtusæ. *Stigma* umbilicatum. *Bacca* monosperma. *Br.*

Specific Name and Character.

CALADIUM *fragrantissimum;* caulescens radicans, foliis cordato-oblongis sagittatis, petiolo semitereti marginato, spadice acuto spatham cucullato-cylindraceam medio constrictam basi ventricosam subæquante.

Among other plants which invest the stems of trees in the forests of the tropics, the different species of CALADIUM constitute a striking feature, both in regard to form and colour. Some are stemless, others have long climbing stems, sending forth thick wiry roots, if they may be so called, for they seem rather calculated to imbibe nourishment from the surrounding atmosphere, than to fix the plant producing them to their place of growth. Their leaves are usually ample, more or less coriaceous, approaching to cordate or sagittate, generally of a dark, shining green hue, often singularly stained and spotted with other colours, and in more than one instance perforated with holes of various forms and sizes. We are familiar with the general form of their inflorescence from that of the ARUM *maculatum* (or

Wake-Robin) of our banks and hedges in England. The floral covering is generally of a pale and unobtrusive colour, and scentless; but in our species and some others it is in part richly tinged with red, and the whole inflorescence yields a fragrance, which in the individual before us, I can only compare with that of the well known Olea *fragrans*, but far more powerful. All are endowed with an acrid and poisonous juice, often of a very virulent nature, as in C. *odorum* and *Seguinum*, and even the Caladium *esculentum (Indian Kale* of the West Indies, *Tarro* of the South Sea Islanders); nevertheless, by dissipating the juices, this latter plant becomes an agreeable and most important article of food.

The new species now figured is from the Liverpool Botanic Garden, communicated in January, 1834, by my valued friend C. S. Parker, Esq. who introduced it to that establishment from Demerara. I was at first disposed to consider it identical with the C. *grandifolium* of Jacquin, especially that variety of it figured by Dr. Sims in the Bot. Magazine, t. 2643; but the powerful and durable fragrance could never have escaped the notice of any one describing the recent plant; and, what is of still more consequence, the petiole is there completely terete or cylindrical, whereas in our plant, it presents a perfectly flat upper surface, with a raised margin on each side.

Descr. *Stem* elongated, rooting. *Petiole* two feet or more long, for its whole length quite flat and margined above, semicylindrical beneath. *Leaf* a foot and a half or two feet long, oblongo-cordate, acute, inclining to sagittate, deeply two-lobed at the base, the lobes slightly divaricating and very obtuse: the veins oblique, distant: the colour every-where green, paler beneath. *Spatha* almost a span long, nearly sessile, convolute and somewhat cucullate, approaching to cylindrical, acute, contracted below the middle, swollen at the base, of a delicate cream-colour, the whole swollen base is red. *Spadix* acute, nearly as long as the spatha, broadest at the base, and there thickly covered with dense *germens*, tipped with the obscurely six-lobed and sessile *stigma;* the rest of the spadix is completely covered with peltate *anthers*, those at the base being abortive.

Fig. 1. Spadix, *nat. size*. 2. Stamen. 3. Pistil: *magnified.*

Mrs C. Horsfall delt   Pub. by S. Curtis. Glazenwood. Essex April 1 1834.   Swan sc.

IPOMÆA HORSFALLIÆ. MRS. HORSFALL'S IPOMÆA.

****

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CONVOLVULACEÆ.)

Generic Character.

Calyx 5-partitus nudus. *Corolla* campanulata v. infundibuliformis, 5-plicata. *Ovarium* 2—3-loculare, loculis dispermis. *Stylus* indivisus. *Stigma* capitatum, 2—3-lobum. *Capsula* 2—3-locularis.—Herbæ *volubiles, quandoque erectæ.* Folia *indivisa vel lobata, nunc pinnatifida.* Semina *in quibusdam comosa. Br.*

Specific Name and Character.

IPOMÆA *Horsfalliæ;* volubilis glaberrima, foliis quinato-digitatis, foliolis lanceolatis integerrimis margine undulatis, cymis dichotomis, calycis lobis imbricatis obtusis æqualibus, corolla infundibuliformi, stigmate bilobo.

In so extensive a Genus as the present, and where many of the species are necessarily very imperfectly described, it behoves us to constitute new ones with great caution: and it is not until after a careful comparison of the present individual, unquestionably one of the most beautiful, with all the descriptions to which I have had access, and with a most extensive collection of the Genus in my Herbarium, that I have considered it to be new, and have given it the name of the lady to whose kindness I am indebted for the drawing. The seeds were received by CHARLES HORSFALL, Esq. either from Africa or from the East Indies, and raised by his very skilful gardener, Mr. HENRY EVANS, at Everton, where the plants produced their lovely blossoms in great profusion during the months of December and January (1833-4), a season when so gay a visitor is particularly welcome to the stove. Mr. EVANS informs me that he has it under the name of I. *pentaphylla;* but the species so called by JACQUIN has hairy leaves, and is in other respects quite a different plant, while the I. *pentaphylla* of CAVANILLES (I. *Cavanillesii*, ROEM. *et* SCHULTES) is still more at variance with our species. I. *Horsfalliæ*, in its inflorescence and blossoms, bears the closest affinity with I. *paniculata*, BR. (*Convolvulus*, L.) but their foliage is so different, that the two plants never can be confounded: the former having compound and quinate leaves, while those of the latter are simply lobed.

DESCR. A tender evergreen. *Stem* twining, of great length, glabrous, as is every part of the plant. *Leaves* upon rather long *petioles*, quinate; *leaflets* five, rarely six or seven (Mr. EVANS,) lanceolate, entire, tapering almost equally at both extremities, the margins slightly crisped or waved. *Peduncles* axillary, about as long as, or longer than, the *petiole*, bearing a dichotomous *cyme* of many *flowers; Pedicels* thickened upwards, smooth. *Calyx* of five equal, roundish-oval, very obtuse, purplish-black, imbricated lobes. *Corolla* infundibuliform; the *limb* short, patent, of five broad, rounded, emarginate lobes, of a very deep rich and glossy rose-colour, equally dark within and without. *Stamens* five, equal, longer than the tube. *Filaments* glabrous, inserted upon a hairy scale or gland which is vaulted beneath. *Germen* globose, surrounded by a large fleshy ring. *Stigma* capitate, two-lobed, hairy. The flowers appear to fall off without bearing seed, probably owing to the season of the year at which they were produced.

Fig 1. Stamen, with its Scale or Gland at the base. 2. Germen and fleshy Ring. 3. Portion of the Style with the Stigma.

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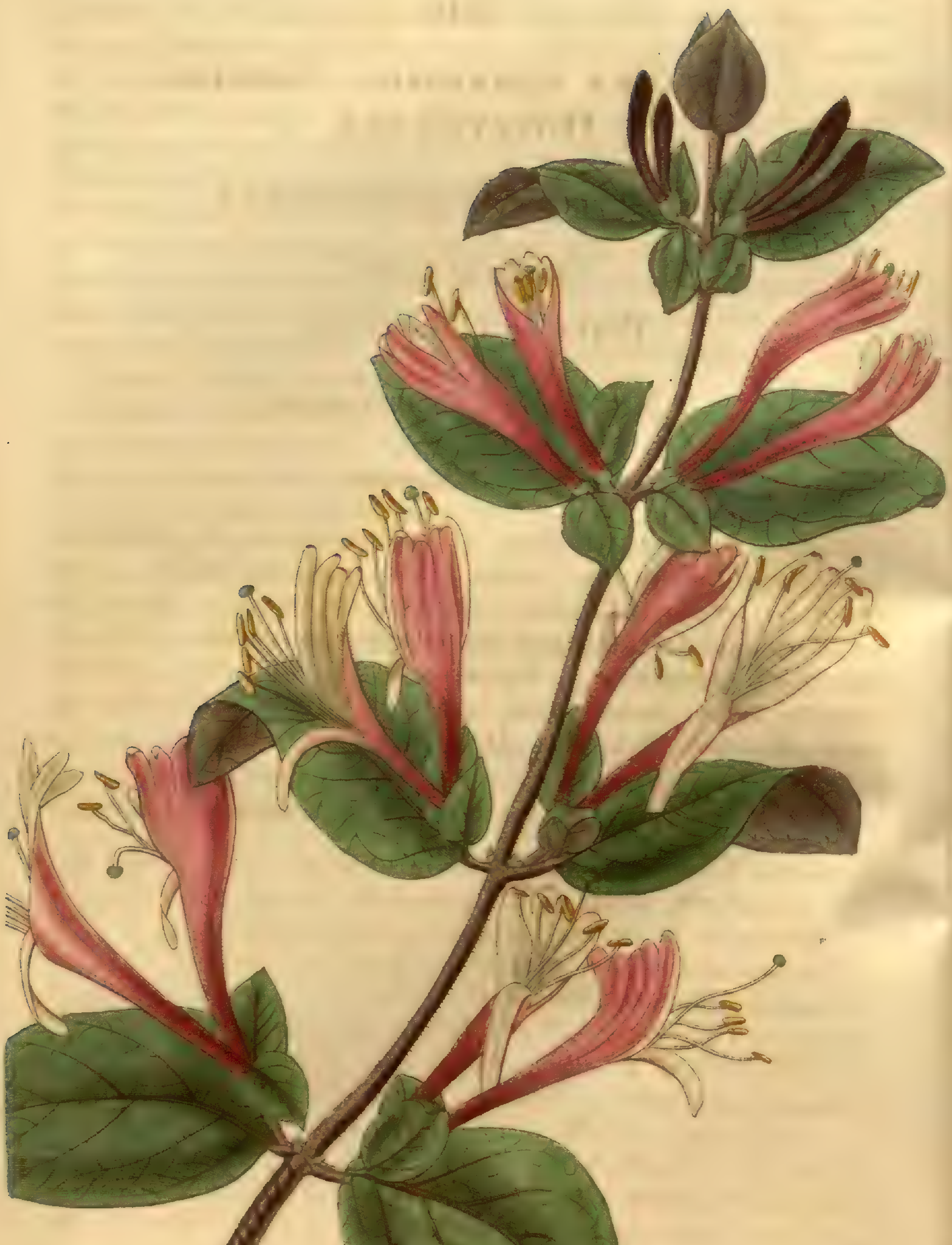

W. Curtis. delt.

Pub. by S. Curtis, Glazenwood Essex Apr 1. 1834

LONICERA CHINENSIS. CHINESE HONEYSUCKLE.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CAPRIFOLIACEÆ.)

Generic Character.

Calycis tubus 5-dentatus. *Corolla* tubulosa, campanulata aut infundibuliformis, limbo 5-fido sæpe irregulari. *Stamina* 5. *Stylus* filiformis. *Stigma* capitatum. *Bacca* 3-locularis, loculis oligospermis. *Semina* crustacea.—Frutices *interdum scandentes.* Folia *opposita, interdum connata, integra aut in iisdem speciebus subruncinata.* Flores *axillares, dispositione varii. D C.*

Specific Character and Synonyms.

LONICERA *Chinensis;* ramis flexuoso-volubilibus junioribus subpilosis, foliis ovatis petiolatis acutis integris (aut sinuatis) in nervis puberulis cæterum glabris, pedunculis axillaribus petioli longitudine bifoliis, floribus inter folia sessilibus. *D C.*

LONICERA Chinensis. *Wats. Dendr. Brit. t.* 117. *De Cand. Prodr. v.* 4. *p.* 333. *Lodd. Bot. Cab. t.* 1087.

LONICERA glabrata. *Wall. in Roxb. Fl. Ind. v.* 2. *p.* 175. (according to *De Cand.,* but not in *Cat. of Pl. in E. I. C. Herb.* 474.)

LONICERA flexuosa. *Ker, in Bot. Reg. t.* 712. *(non Thunb.)*

LONICERA Japonica. *Thunb. Fl. Jap. p.* 89. *(Sweet in De Cand.)*

Much confusion seems to have arisen with regard to the present species of Honey-suckle; some having taken it for the L. *flexuosa* of THUNBERG, while others consider it to be the L. *Japonica* of the same author, and the L. *glabrata* of

Roxburgh's Flora Indica. It is certain, however, that it is the L. *Chinensis* of Watson's Dendrologia, a name which De Candolle has preferred. Being a native of China, it was at first treated as an inmate of the greenhouse or conservatory, but it now proves to be perfectly hardy, and I have scarcely witnessed a more beautiful sight than a plant of this Honeysuckle, trained against the wall of Mr. Curtis's house at his extensive Nursery at Glazenwood, with its long pendent shoots and its copious flowers, appearing through a great part of the summer and autumn and scenting the air with their fragrance. From a branch of that plant, our drawing was made by Mr. S. M. Curtis.

Descr. *Stems* long, climbing. *Branches* glabrous (except the younger ones), red-brown. *Leaves* opposite, ovate, acute, or somewhat acuminate, entire, veiny, on short *petioles,* the upper and younger ones red-brown beneath and at the margin. *Peduncles* from the axils of all the upper leaves, short, solitary, each bearing two *flowers,* having two ovate *bracteas* or small leaves at their base. *Germens* distinct, roundish, oval. *Corolla* red without, yellowish-white within, glabrous, the *tube* gradually widening, the *limb* two-lipped : *upper lip* broad, erect, with four strap-shaped segments, the *lower lip* of one linear-strap-shaped, recurved segment. *Stamens* as long as the corolla. *Style* longer than the stamens.

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W.J.H. del.

Pub by S. Curtis Glazenwood Essex April 1. 1834.

Swan Sc.

STREPTANTHUS OBTUSIFOLIUS. BLUNT-LEAVED STREPTANTHUS.

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Class and Order.

TETRADYNAMIA SILIQUOSA.

(Nat. Ord.—CRUCIFERÆ.)

Generic Character.

Calycis foliola erecta, acuminata, colorata, basi saccata. *Staminum filamenta* subulata, brevia. *Antheræ* elongatæ, acuminatæ. *Siliqua* longissima, tetragono-compressa. *Semina* uniseriata compressa, marginata. *Cotyledones* accumbentes.—Flores *purpurascentes.*

Specific Name and Character.

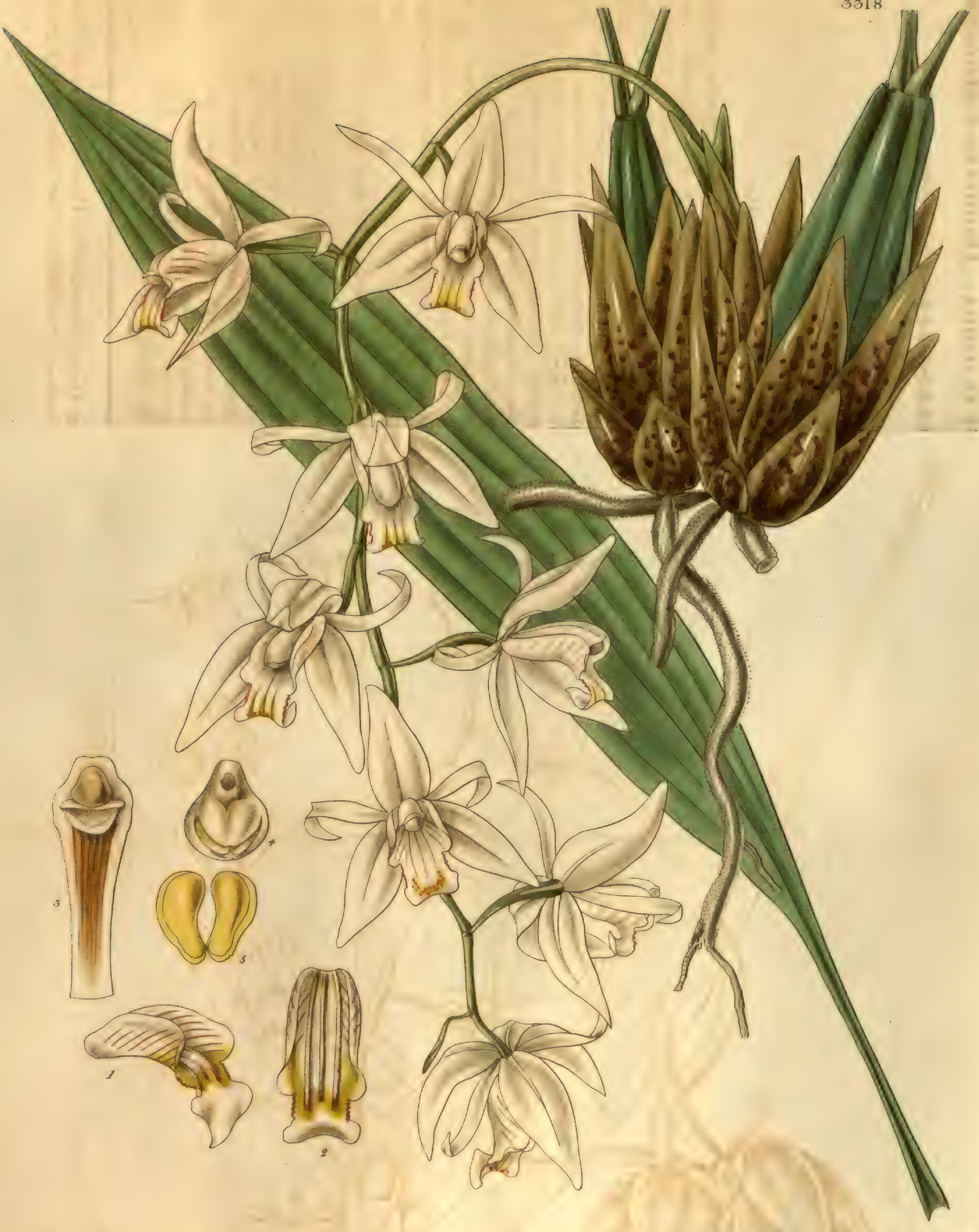
STREPTANTHUS *obtusifolius;* foliis ellipticis obtusissimis basi profunde bilobis amplexicaulibus.

In the beginning of last year, Dr. SHORT of Lexington, Kentucky, sent me some seeds of the present plant, which he received under the name of "*Arkansa Cabbage,*" from the hot-springs of the Arkansa territory. These were sown in the Glasgow Bot. Garden and produced plants, whose foliage and inflorescence so nearly resembled those of MORICANDIA *arvensis,* (Bot. Mag. t. 3007,) that I was at first, notwithstanding the singular locality, almost induced to believe they were the same. But an examination of the flowers and fruit soon led to a different conclusion. Here the calyx-leaves are remarkably acuminated, and singularly membranaceous, all of them hollowed and saccate at the base; the petals have a peculiar twist. The filaments of the stamens are short and subulate, the anthers very long and acuminated; the style almost wanting. The seeds flat and broadly margined, the cotyledons flat. Still

I could find no Genus to correspond with this till some months after my drawing was made, when I received from my friend Dr. Torrey, the fifth vol. of the Journal of the Acad. of Nat. Sciences of Philadelphia, and found a very accurate figure and description of a species of the Genus, under the name of Streptanthus (*στρεφω to turn* or *twist*, and *ανθος*, a *flower*, in allusion to the twisted petals) *maculatus*. That author discovered his species " amongst rocks and on shelving hills, near the banks of the Kiamesha of Red River in Arkansa territory," and observes that it is a very showy and remarkable plant; a character equally applicable to our present species, which differs strikingly in the leaves from Mr. Nuttall's S. *maculatus*. It will no doubt bear the open air of our climate, though Mr. Murray has hitherto had the precaution to keep it in the greenhouse. The Genus may rank next to Arabis.

Descr. *Root* annual. *Stem* erect, simple, or branched, rounded, glabrous. *Leaves* few, oblong or more frequently elliptical, amplexicaul, with a very deep narrow sinus or cleft at the base, obtuse, forming two straight parallel lobes, glaucous-green. The *branches* terminate in long *racemes* of large *flowers*. *Calyx* of four ovate, much acuminated, membranaceous, pale purple *sepals*, concave at the base, two opposite inserted lower down and more concave or saccate at the base. *Petals* obovate, on long and at length twisted claws, fine rose-colour with a very deep lake-coloured spot at the base of each limb. *Stamens* very slightly unequal in length. *Filaments* short, subulate, white. *Anthers* longer than the *filaments*, pale purple, much acuminated, opening chiefly below. *Pollen* yellow. *Germen* linear. *Stigma* almost sessile, shortly two-lobed. *Pod* four to five inches long, linear, compressed, but somewhat tetragonal from the valves having a dorsal carina for their whole length: there are besides some obscure veins. *Seeds* in a single series, much compressed, with a rather broad, membranous, wrinkled margin. *Embryo* greenish-yellow: *Cotyledons* flat. *Radicle* directed to the margins of the cotyledons.

Fig. 1. Calyx and Pistil. 2. Petal. 3. Stamens and Pistil. 4. Stamen. 5. Anther with the Pollen escaping. 6. Pistil. 7. Pod. 8. Portion of ditto. 9. Seeds. 10. Embryo: all but fig. 7. *magnified*.



W J H del.

Pub. by S. Curtis, Glazenwood, Essex, May 1. 1834.

Swan Sc.

(3318)

CÆLOGYNE FLACCIDA. DROOPING CÆLOGYNE.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala conniventia vel patentia, libera, æqualia, petaloidea. *Petala* nunc sepalis conformia, nunc linearia. *Labellum* cucullatum, sæpius trilobum, lineis disci elevatis v. cristatis, nunc integerrimum ecristatum (in *Panisca*). *Columna* erecta, libera, margine alata, apice dilatata, nunc cucullata, stigmate bilabiato. *Anthera* bilocularis, septo medio non partibili, infra apicem columnæ inserta. *Pollinia* 4, libera, (88) incumbentia; nunc basi materie granulosa cohærentia.—Herbæ *supra arbores et saxa vigentes, foliorum basibus in pseudo-bulbos dilatatis, rhizomate nunc crasso squamoso, nunc obsoleto.* Folia *coriacea, sæpius venis distinctis æqualibus, nunc quibusdam crassioribus, costata v. plicata.* Racemi *terminales v. radicales, e squamis (bracteis sterilibus) corneis erumpentes. Flores speciosi sæpe odorati. Lindl.*

Specific Character and Synonyms.

CÆLOGYNE *flaccida;* pseudo-bulbis oblongis angulatis squamis coriaceis acuminatis ustulatis vestitis, foliis lanceolatis v. oblongo-lanceolatis longe petiolatis, racemo flexuoso nutante, bracteis deciduis, petalis lineari-lanceolatis, labello ovato trilobo lineis tribus elevatis flexuosis lobo medio ovato basi auriculato (seu dilatato,) columna integerrima. *Lindl.*

CÆLOGYNE flaccida. *Lindl. in Wall. Cat. n.* 1961. *Lindl. Gen. et Sp. Orchid. v.* 1. *p.* 39.

The present Genus, so called by Professor LINDLEY (from χοιλος, *hollow*, and γυνη, in allusion to the hollow, or depression

of the stigma) contains no less than twenty-one species, all natives of the East Indies; but of which very few are at present known in our European gardens: and all that we do possess we owe to the liberality of Dr. WALLICH. From that source the present species was derived, having been received by the Hon. and Rev. WILLIAM HERBERT, who again communicated it with many other beautiful and rare orchideous plants, to the gardens at Wentworth. There the present species flowered in great perfection in February 1833, and I am obliged to Mr. COOPER for the opportunity of figuring and describing it. It was discovered at Noakote in Nepal, by Dr. WALLICH.

DESCR. *Bulbs* clustered, from three to five inches long, oblongo-ovate, tapering upwards, furrowed, partly concealed by large, glossy, purplish-green, ovato-acuminate, largely imbricated, very rigid scales, bearing at the extremity two, somewhat coriaceous, erect, lanceolate *leaves*, eight to ten inches long, striated, glossy above. *Raceme* arising from the base of the bulb and within the scales, eight to ten inches long, drooping, its peduncle short, thickened at the base, and imbricated with scales. *Rachis* somewhat zigzag, bearing (in our specimen) eight moderately large, inodorous flowers. *Bracteas* quickly deciduous. *Sepals* and *petals* pure white, spreading, the three former oblong, somewhat acuminated, the two latter linear, approaching to lanceolate. *Labellum* oblong, involute at the sides, three-lobed, intermediate lobe elongated, cordate, acuminated, recurved: the disk has three longitudinal, elevated, and waved lines or ridges. The colour of this labellum is white, blotched with yellow at the base of the middle lobe, and at the base of the disk. *Column* club-shaped, compressed, dilated and almost winged above, and around the *anther*, which is somewhat conical, opening as it were with two lips, and containing four club-shaped and somewhat falcate, wavy *pollen-masses*, not connected by a peculiar gland at the base. *Stigma* two-lipped, hollow in the centre.

Fig. 1. Side view, and fig. 2, front view of the Labellum. 3. Column. 4. Under-side of the Anther. 5. Pollen-masses:—*magnified.*

J. H. del.

Pub. by S. Curtis, Glazenwood Essex May 1. 1834

BLETIA SHEPHERDII. DEEP-PURPLE-FLOWERED BLETIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala patentia æqualia. *Petala* nunc patentia, nunc conniventia, sepalis æqualia. *Labellum* cucullatum, cum columna articulatum, nunc basi saccatum, trilobum, disco sæpius lamellato v. tuberculato. *Columna* elongata, semiteres. *Anthera* carnosa, 8-locularis. *Pollinia* 8 æqualia, caudiculis 4 pulvereis cohærentia.—Herbæ *subterrestres,* foliis *ensiformibus plicatis,* scapis *racemosis multifloris,* floribus *sæpius speciosis. Lindl.*

Specific Name and Character.

BLETIA *Shepherdii;* perianthio erecto-patenti, sepalis oblongis acutis, petalis obtusissimis undulatis, labelli disco lamellis 5—7 rectis undulatis lobo intermedio reflexo lato cuneato bilobo valde crispato, foliis lato-lanceolatis longe acuminatis.

This beautiful plant is a native of Jamaica, having been received from that country by the Messrs. SHEPHERD at the Liverpool Garden, where it has been long cultivated, and whence specimens have more than once been communicated to me, with the remark, that it was probably a new species. From Wentworth* Gardens I have likewise received fine flowering specimens of the same plant, which

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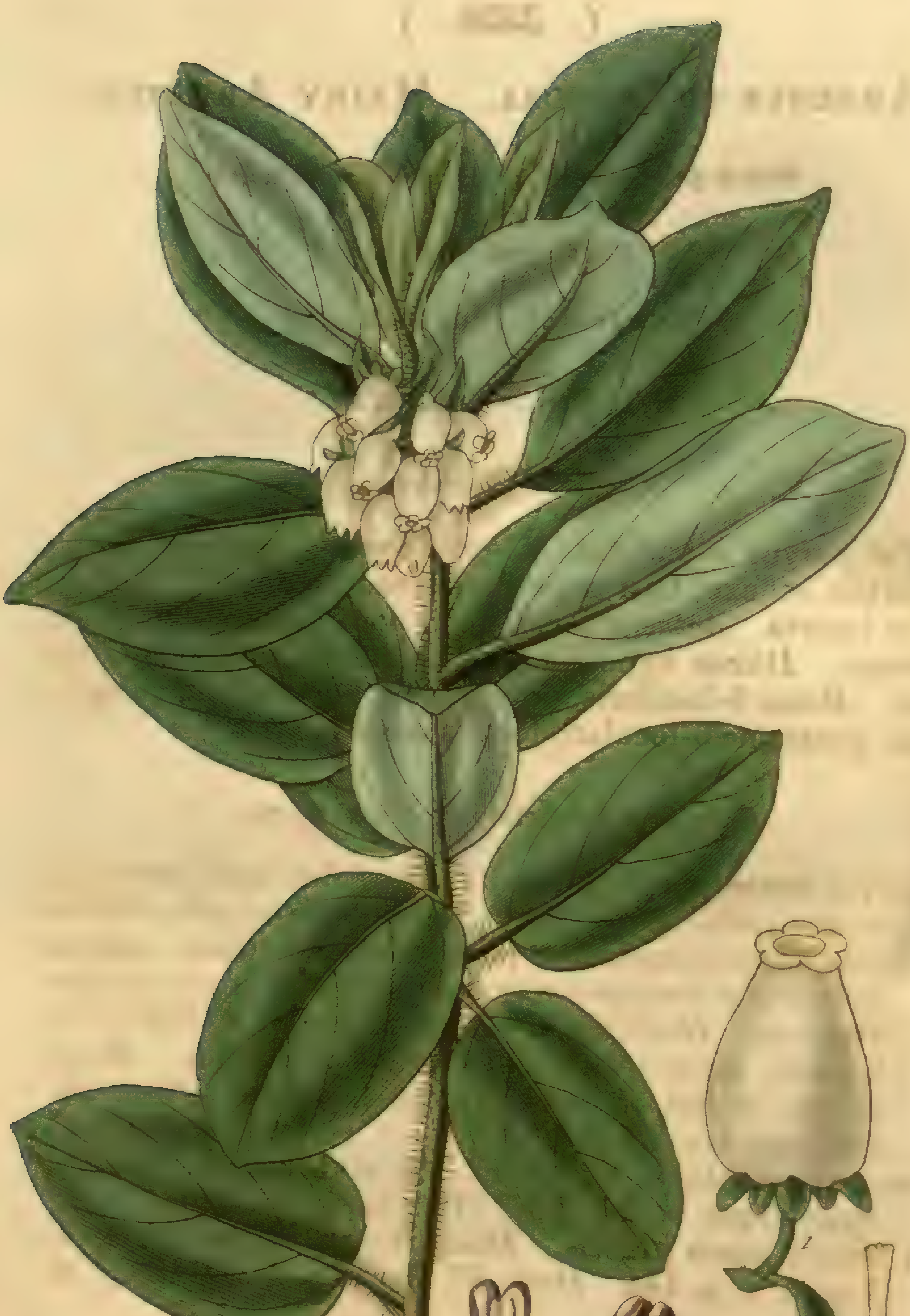
* From which, indeed, our present figure is taken.

Mr. Cooper obtained from Liverpool, and always retaining its characteristic form and rich and deep purple colour. Its nearest affinity is with Bletia *verecunda*, (Limodorum *altum*, Bot. Mag. t. 930, not of Jacq. Ic. Rar. t. 602,) but there the flowers are much smaller, greatly shorter in proportion to the size, very gibbous or almost spurred at the base, the sepals much more patent, and very pale on the outside, and the lip has a white margin: the leaves, too, are much narrower.

Our plant has been cultivated by Messrs. Shepherds, under the name of "Limodorum *tuberosum*," from an idea, perhaps, that it was the "L. *altum* vel *tuberosum* of Jacquin." But that plant I have endeavoured to prove is the same with our Bletia *acutipetala* (Tab. 3217); and the name *tuberosum* being equally applicable to other species of the Genus, I am anxious it should bear the name of the Messrs. Shepherd, uncle and nephew, who have cultivated the Orchideous as well as other plants with so much success, and who have paid particular attention to the species of the present Genus.

Descr. The general mode of growth in this is very similar to that of B. *verecunda* and B. *acutipetala*. The *leaves* are a foot and a half long, broadly lanceolate, tapering much at both extremities, plaited and striated. *Scape* two or three feet high, branched. *Flowers* both within and without of an uniform, deep purple colour, except the column, which is pale, and the lamella of the disk of the lip, which are dirty yellow. All the segments of the perianth are erect, spreading only at their extremity, which becomes quite erect again when the flowers begin to fade.

Fig. 1. Lip. 2. Column. 3. Summit of the Column, the Anther (fig. 4.) being removed. 5. Pollen-masses:—*magnified.*



W.J.H. del.

Pub by S.Curtis, Glazenwood, Essex, May 1 1834.

Swan Sc.

ARBUTUS TOMENTOSA. HAIRY ARBUTUS.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—ERICINEÆ.)

Generic Character.

Cal. parvus, 5-partitus. *Corolla* ovata v. globosa, limbo 5-partito reflexo, basi sæpe diaphana. *Stam.* 10, basi corollæ inserta. *Antheræ* loculi apici poro dehiscentes, dorso aristato. *Discus* hypogynus decangularis. *Stigma* obtusum. *Bacca* 5-locularis, polysperma, nunc drupa subglobosa, putamine 5-loculari, loculis monospermis.

Specific Character and Synonyms.

ARBUTUS *tomentosa;* fruticosa, erecta, foliis brevi-petiolatis acutis coriaceis ovalibus ovatisve (nunc subcordatis) integerrimis junioribus pubescenti-tomentosis, racemis compositis brevibus terminalibus congestis foliis brevioribus. *Hook. Fl. Bor. Am. v.* 2. *ined. t.* 129.

(α.) *hispida;* ramis setosis, setis longis patentibus. *Hook. et Arn. in Bot. of Beech. Voy. v.* 1. *p.* 144. *Hook. Fl. Bor. Am. l. c. t.* 129. *f.* 1.

ARBUTUS tomentosa. *Pursh, Fl. Am. v.* 1. *p.* 282. *Spreng. Syst. Veget. v.* 2. *p.* 287. (Tab. nostr. t. 3320.)

(β.) *nuda;* ramis glabris. *Hook. et Arn. in Bot. of Beech. Voy. v.* 1. *p.* 144. *Hook. Fl. Bor. Am. l. c. t.* 129. *f.* 4.

For the discovery of this interesting and very distinct species of ARBUTUS we are indebted to the venerable MENZIES, who gathered it near the mouth of the Columbia. Mr. DOUGLAS noticed it as growing in rocky places, and extending from California (San Francisco, where it was collected by the naturalists of Capt. BEECHEY'S voyage) in the south, to Puget's Sound in the north. We are favoured

likewise by Professor Lindley, with specimens of an Arbutus gathered at Vera Cruz, which we cannot distinguish from the present. The *var.* β. seems to be the more southern state of the species.

The Glasgow Botanic Garden (where it flowered in the greenhouse, in December, 1833) is indebted for the possession of this plant to the Horticultural Society of London, to which it had been introduced by Mr. Douglas. It is well worthy a place in every collection, bearing copious evergreen foliage, and flowers of a snowy whiteness, well contrasted with the green of the leaves.

Descr. With us the *shrub* has not exceeded a foot, or a foot and a half in height, branched, the young *branches* and short *petioles* clothed with patent rigid hairs. *Leaves* oval, but varying to ovate, or even nearly cordate, coriaceous, rather acute, quite entire, of a dull full green colour, the younger ones pubescent or even woolly. *Racemes* from the axils of the nearly terminal leaves, generally drooping, compound, dense. *Bracteas* linear-lanceolate, ciliated, reflexed. *Calyx* with its segments obtuse, spreading. *Corolla* ovate, pure white, the mouth with five small, blunt, spreading teeth, within yellowish and slightly hairy. *Filaments* much dilated at the base, and there fringed. *Anthers* deep purple, their awns long, deflexed, yellow. *Germen* subglobose, downy. *Style* straight. *Stigma* obtuse, yellow.

Fig. 1. Flower and Bractea. 2. Two Stamens. 3. Pistil:—*magnified.*

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EUPHORBIA ATRO-PURPUREA. BLOOD-FLOWERED SPURGE.

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Class and Order.

MONŒCIA MONANDRIA.

(Nat. Ord.—EUPHORBIACEÆ.)

Generic Character.

Involucrum androgynum, 4—5-fidum, extus appendiculis glandulosis *(petala,* L., *nectaria* aliorum) : peripherici *pedicelli* incerti numeri, singuli cum singulis staminibus articulati. *Germen* pedicellatum, centrale. *Styli 3,* bifidi. *Capsula* 3-cocca. *Spr.*

Specific Character and Synonyms.

EUPHORBIA *atro-purpurea ;* inermis, fruticosa, ramis apice foliosis, foliis lanceolatis integerrimis glaucis floralibus quaternis oblongis coloratis, umbella terminali sessili, radiis 4-fidis, bracteis duabus oblongo-latissimis coloratis basi connatis, involucri glandulis 4 retusis, germine lævi.

EUPHORBIA atro-purpurea. *Willd. Enum. v.* 1. *p.* 501. *Spreng. Syst. Veget. v.* 3. *p.* 790.

Of this extensive Genus (named in honour of EUPHORBUS, Physician to JUBA, King of Mauritania,) the different kinds of which are so remarkable for the copious acrid, milky juice, in some constituting Caoutchouc, no less than two hundred and nine species are enumerated in SPRENGEL'S Syst. Veget. ; and numerous undescribed ones are known to exist in our Herbarium. Many recommend themselves to cultivation by the strangeness of their forms, especially among the more succulent kinds, a few by the rich colours, not of the flowers indeed, but of the bracteas and floral

leaves. The present, though it cannot vie with the E. *splendens* (t. 2902.) or E. *punicea,* both of which bear such rich scarlet bracteas, is yet well deserving a place in every greenhouse, from the deep blood-colour of its bracteas and floral leaves, which present a strong contrast to the pale glaucous hue of the rest of the foliage. It is a native of Teneriffe, discovered by M. BROUSSONET, and sent to the Glasgow Botanic Garden, where it blossomed in March, by Mr. FISCHER of the Göttingen Botanic Garden.

DESCR. *Stem,* in our plant, between three to four feet high, frutescent, thicker than the human finger, dichotomously branched above, bare of foliage (but copiously marked with the scars of the fallen leaves) except at the summits of the branches. There the *leaves* are numerous, three to five inches long, lanceolate, tapering at the base, obtuse, pale glaucous-green, patent or drooping, nerves obsolete. *Umbel* of from eight to ten rays, each of which is quadrifid or four-rayed, these lesser rays having each an oblong coloured *bractea* at its base, forming a four-leaved involucre. Two other *bracteas* immediately surround the proper involucre, these are large, deep red-purple or blood-coloured, broadly oblong, obtuse, combined at the base. *Proper involucre* small, cup-shaped, red, with four retuse, fleshy, yellow-green *glands* at the margin. *Male flowers;* about four are excluded at the same time. *Cells* of the *anthers* globose, distinct. *Female Flowers; Germen* globose, shortly pedicellate. *Style* with three bifid segments.

Fig. 1. The two coloured Bracteas, including the Involucre and Flowers. 2. Involucre (the Flowers being removed). 3. Male Flower:—*magnified.*

3322

W. J. H. del.t

Pub. by S. Curtis. Glazenwood. Essex May 1 1834.

Swan

CYMINOSMA OBLONGIFOLIA. OBLONG-LEAVED CYMINOSMA.

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—RUTEIS AFFINIS.)

Generic Character.

Cal. brevis, 4-partitus. *Pet.* 4 oblongo-lanceolata. *Stam.* 8, quorum 4, subbreviora petalis opposita, filamentis complanatis. *Ovarium* disco carnoso magno impositum, 4-loculare, loculis " biovulatis, ovulis superpositis." *Stylus* breviusculus. *Stigma* subintegrum. *Fructus* baccæformis. *Pericarpium* carnosum, 4-loculare: *endocarpium* crustaceum; loculis monospermis. *Albumen* carnosum. *Radicula* brevis ad lutum seminis versa. Arbores *aut* arbusculæ. Folia *opposita aut alterna.* Folia *integra glanduloso-punctata, punctis pellucidis.* Petiolus *articulatus.* Pedunculi *axillares aut terminales, apice corymbosi.* Flores *albidi vel pallide luteo-virides.*

Specific Character and Synonym.

CYMINOSMA* *oblongifolia;* foliis oblongis obtusis subcoriaceis basi attenuatis, pedunculis axillaribus petiolo vix duplo longioribus, ovario apice piloso.
CYMINOSMA oblongifolia. *Allan Cunningham, MSS.*

A native of the colony of Port Jackson, " inhabiting dark, shady woods upon the rivers and immediate coast of New South Wales." It has also been observed within the tropic, according to Mr. ALLAN CUNNINGHAM, by whom it was introduced to Kew in 1824, and was thence communi-

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* Κυμινον, *cumin,* or *cumin-seed,* and οσμη, *smell,* on account of its peculiar fragrance.

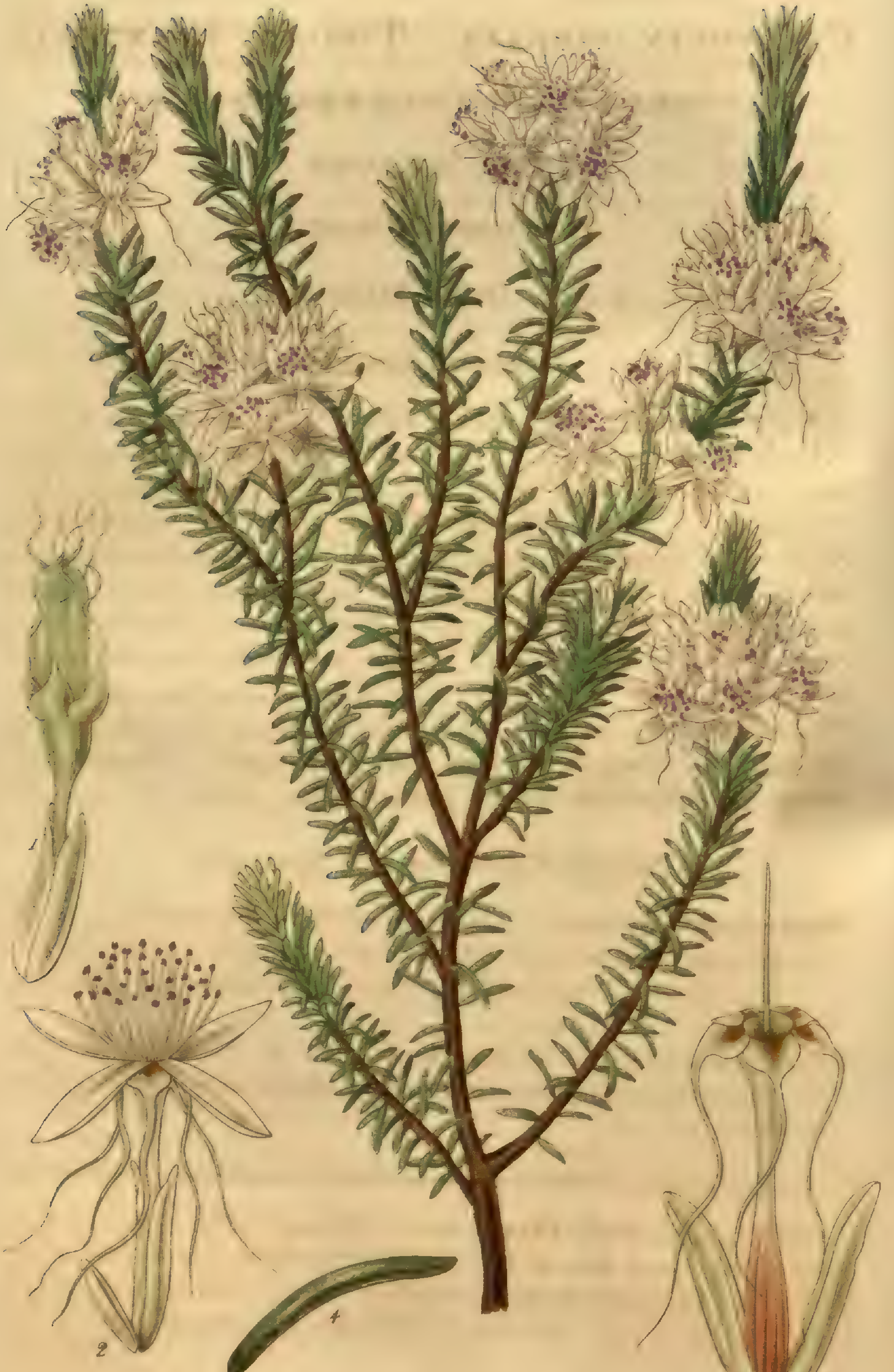
cated to us by Mr. AITON. It is treated as a hardy greenhouse plant, and flowers in the summer and autumn.

This plant does not appear to have been hitherto noticed by any author, nor has any species of the Genus been mentioned as a native of Australia. It is closely allied in many respects to CYMINOSMA *pedunculata,* D C. (JAMBOLIFERA *pedunculata,* LINN.) which is the same as the GELA *lanceolata* of LOUREIRO, according to Mr. BROWN, and consequently as XIMENIA? *lanceolata,* D C.; especially to that variety figured by LODDIGES (Bot. Cab. t. 938,) with short peduncles. Our specimens of that species from China have broader leaves, and those from Ceylon and the southern Peninsula of India, broader still, less coriaceous than in the present individual, and with a much more hairy ovary.

DESCR. A glabrous *shrub,* with red-brown branches. *Leaves* alternate or opposite, oblong, obtuse, simple or rarely trifoliolate, marked with pellucid dots. *Petiole* jointed near the summit, and there and at the base swollen. *Peduncles* axillary or terminal, short, about twice as long as the petiole, bearing a corymb of flowers. *Calyx* four-partite, persistent, small. *Petals* four, patent, in æstivation valvate. *Stamens* alternately longer and more patent. *Germen* ovate, on a large fleshy disk, about as long as the style, *Stigma* obscurely four-lobed. *Fruit* a dry, four-sided *drupe,* with four crustaceous cells, each with one seed. *Seeds* erect, callous at the hilum.

Fig. 1. Flower. 2. Pistil and glandular Disks. 3. Section of the Fruit: —*magnified.*

3323.



W. J. H. del.

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Swan Sc.

Calythrix virgata. Twiggy Calythrix.

Class and Order.

Icosandria Monogynia.

(Nat. Ord.—Myrtaceæ.)

Generic Character.

Calycis tubus basi ovario adhærens desinens in tubum cylindraceum gracilem; *limbus* 5-partitus persistens, lobis basi ovatis in setam corollâ longiorem abeuntibus. *Pet.* 5 decidua. *Stam.* 10—30 libera, antheris subrotundis. *Stylus* filiformis staminum longitudine. *Fructus* exsuccus indehiscens 1-locularis, in ovario biovulatus, maturus monospermus. Frutices *ericoidei Australasici.* Folia *sparsa conferta tereti-subangulata rigida, sæpissimè breviter petiolata et stipulis 2 rigidis minimis filiformibus instructa.* Flores *axillares solitarii subsessiles, bracteis 2 membranaceis carinatis persistentibus basi connatis stipati.* Petala *purpurea aut alba exsiccatione flavescentia. D C.*

Specific Character and Synonyms.

Calythrix[*] *virgata;* foliis petiolatis (stipulatis) sparsis, adultis bracteisque glaberrimis, bracteis tubo calycis dimidio subbrevioribus, ramulis tenuiter virgatis glabellis. *All. Cunn.*

Calytrix ericoides. *Cunn. in Field's N. S. Wales, p. 350.* (Specific name unsuited, being applicable to the whole Genus.) *C.*

Calythrix, with Darwinia of Rudge, (the character of which has been recast by Mr. David Don,) and probably five other Genera of the Australian Flora, constitute a very beautiful group of the Order Myrtaceæ, denominated by M. De

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[*] Καλυξ, a *calyx,* and ϑριξ, a *hair,* from the remarkable hair-like terminations of the calyx; and not from καλυξ, and τριξος, *treble,* as some explain it; misled, perhaps, by Labillardiere, the framer of the Genus, having spelled the word, *calytrix.*

M. **De Candolle** the *Chamælaucieæ,* the characters of which were we believe, very ably defined, many years ago, by that eminent botanist, Mr. **Brown.**

The Genus of our present subject, which appears to have an extensive geographical range on the Australian continent, (the species having been observed sparingly scattered on all the coasts within and beyond the tropic, as well as in the explored tracts of the interior to the westward of the colony at Port Jackson, and one species having been found in Van Diemen's Land,) was originally proposed by M. **Labillardiere** in his work on the plants of New Holland: but the description and figure there given of it, which appear evidently to have been taken from a dried specimen of the plant he had himself discovered (as he says) at 'Leeuwin's Land' (properly *Nuyt's Land)* on the southern coast of Australia, are not sufficiently accurate to enable us to determine what the particular species may be, which he gathered so long back as the year 1792. Three species are now in cultivation in the English gardens, and the one now figured differs from C. *glabra* (to which it is very closely allied) in having its leaves considerably less crowded on the branches, which are altogether smoother, more slender and twiggy, and much more productive of flowers at the extremities. It is moreover a freer flowering shrub, and as it continues in that condition longer than C. *glabra,* and is readily increased by cuttings; it has much to recommend itself to the choicer cultivators, of this country.

It was originally discovered by Mr. **Allan Cunningham,** in the hilly country around Bathurst, who introduced it in 1823 to Kew Gardens, whence our specimens were obligingly communicated by W. T. **Aiton,** Esq.

Descr. A twiggy *shrub,* with glabrous stems and branches. *Leaves* scattered, lax, patent, (less so and more crowded in the younger branches,) tereti-filiform, acute, dotted, shortly petiolated. *Stipules* deciduous. *Flowers* axillary, mostly collected in tufts at the ends of the branches, white, very fragrant. *Bracteas* 2, erect, membranaceous, almost convolute, combined at the base, keeled at the back, about half as long as the tube of the calyx. *Calyx-tube* elongated, very narrow upwards; segments broadly ovate, with very long hair-like points. *Petals* five, oblong, patent, white. *Stamens* about twenty, inserted on the mouth of the calyx. *Style* as long as the stamens.

Fig. 1. Unexpanded Flower. 2. Flower. 3. Calyx and Bracteas. 4. Leaf:—*magnified.*

The following Synopsis of the species of the Genus, has been communicated to us, by Mr. Cunningham.

* *Stipulatæ.*

1. C. *glabra;* icosandra, foliis petiolatis confertis adultis bracteisque glabris, ramulis erectis glabriusculis sæpiusve pube brevi conspersis.

Calythrix glabra. *De Cand. Prodr. v.* 3. *p.* 208.

Calytrix glabra. *Brown in Bot. Reg. t.* 409. *Lodd. Bot. Cab. t.* 586.

Hab. In Australasiæ orâ orientali, circa Port Jackson, atque in Insulâ Van Diemen. *G. Caley. Allan Cunningham.* (v. v.)

2. C. *virgata;* (supra t. 3323).

Hab. In Novæ Cambriæ Australis partibus interioribus, in collibus saxosis prope Bathurst, etc. *Allan Cunningham,* 1822. (v. v.)

3. C. *curtophylla;* icosandra, foliis petiolatis brevibus obtusis, bracteis ramulisque glabris, bracteis tubo calycis quadruplo brevioribus.

Hab. In Australasiæ orâ meridionali-occidentali. King George's Sound. *C. Fraser,* 1827. (v. s.)

4. C. *tetraptera;* icosandra, foliis petiolatis adultis bracteisque glabris, ramulis villoso-velutinis. *De Cand. Prodr.* 3. *p.* 208.

Calytrix tetragona. *Labill. Nov. Holl.* 2. *p.* 8. *t.* 146.

Hab. In terrâ Van Leeuwin, (ad oram meridionalem Austr.) *Labillardiere,* 1792. †

5. C. *decandra;* decandra, foliis petiolatis (ferè semuncialibus) acutis concavo-planiusculis, bracteis acuminatis ramulisque lævibus, tubo calycis bracteis ter longiore.

Calythrix decandra. *De Cand. Prodr. v.* 3. *p.* 208.

Hab. In Australasiæ orâ meridionali. *R. Brown,* 1802. *Guil. Baxter,* 1829. (v. s.)

6. C. *Fraseri;* icosandra, foliis petiolatis obtusis arcuatis suprà subplaniusculis bracteis ramulisque lævibus, bracteis retusis tubo calycis quater brevioribus, aristis petala ovato-acuta bis superantibus.

Hab. In Australasiæ, ad oram occidentalem. Swan River. *C. Fraser,* 1827. (v. s.)

7. C. *flavescens;* icosandra, foliis petiolatis modicè patentibus reflexisve, bracteis ramulisque valdè glabris, bracteis attenuatis aristatis, tubo calycis triplo brevioribus.

Hab. In Australasiæ orâ occidentali. Swan River. *C. Fraser,* 1827. (v. s.)

8. C. *strigosa;* icosandra? foliis petiolatis brevibus obtusis valdè sparsis bracteis ramulisque glabris, tubo laciniisve calycis strigoso-pilosis, bracteis tubo ter brevioribus.

Hab. In Australasiæ orâ occidentali; in campis arenosis aridis Insulæ Dirk Hartog. *Allan Cunningham,* 1822. (v. v.)

9. C. *brunioides;* icosandra? foliis petiolatis sparsis densè echinato-scabridis, marginibus carinisque bractearum villoso-ciliatis, bracteis dimidium tubi lævis calycis vix æquantibus, ramulis valdè cinereo-tomentosis.

Hab. In Novæ Cambriæ Australis parte interiore, in locis sterilibus saxosis, inter Croker's Range et Wellington. *A. Cunningham,* 1825. (v. v.)

10. C. *scabra;* icosandra, foliis petiolatis hispido-scabris, marginibus carinisque bractearum piloso-ciliatis, dimidio inferiore tubi calycis bracteas æquante, ramulis villoso-velutinis.

Calythrix scabra. *De Cand. Prodr.* 3. *p.* 208.

Calytrix glabra. *Sieb. Herb. Nov. Holl. n.* 285. fide exempl. in Herb. D. Lambert.

Hab. In Australasiâ, circa Sydney; atque in montibus prope Port Jackson. *G. Caley*, 1804. *A. Cunningham*, 1817. (v. v.)

** *Exstipulatæ.*

11. C. *conferta;* icosandra, foliis sessilibus acutis imbricatis incurvatis ciliatis margine asperis, ramulis glabris, bracteis subscabris tubum calycis subæquantibus, marginibus laciniarum calycis ciliatis, aristis petalorum ferè longitudine.

Hab. In Australasiæ orâ septentrionali-occidentali, ad littora arida. Cambridge Gulf. *A. Cunningham*, 1819. (v. v.)

12. C. *microphylla;* icosandra, glaucescens, foliis brevissimis sessilibus obtusis, (cum mucronulo), supèr concavis, bracteis acuminatis tubo calycis triplobrevioribus, petalis aristas superantibus, marginibus aristarum retrorso-denticulatis.

Calythrix exstipulata. *De Cand. Prodr. v.* 3. *p.* 208.

Hab. In Australasiâ, ad oram septentrionalem. Carpentaria. *R. Brown*, 1802. Palm Bay, Port Essington, etc. *A. Cunningham*, 1818. (v. v.)

W.J.H. delt

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(3324)

TROCHOCARPA LAURINA. CINNAMON-LEAVED TROCHOCARPA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Calyx bracteatus. *Cor.* infundibuliformis, limbo patenti, barbato. *Ovarium* 10-loculare. *Drupa* baccata, putamine rotato-10-lobo, demùm partibili. Arbor *parva, tota glabra, ligno durissimo.* Folia *sparsa, petiolata, nervosa* (laurina). Spicæ *terminales et axillares.* Flores *albi. Br.*

Specific Character and Synonyms.

TROCHOCARPA* laurina. *Br. Prodr. Nov. Holl. v.* 1. *p.* 548.
STYPHELIA cornifolia. *Rudge in Linn. Trans. v.* 8. *t.* 9.
CYATHODES laurina. *Br. olim in Herb. Banks. dein* D. Rudge *in Linn. Trans. v.* 8. *p.* 293.

This is an extremely pretty evergreen shrub, having very glossy, evergreen leaves, with parallel nerves resembling those of many of the Laurel tribe, and, like the LAURUS *cinnamonum,* of a fine and delicate red colour when young. The Genus is confined to a single species, a native of Port Jackson, whence it was introduced by Mr. A. CUNNINGHAM to the Royal Gardens of Kew. Our specimens were kindly communicated by Mr. AITON.

DESCR. A Tree of regular growth, not unfrequently attaining in its native country, the height of twenty-five feet, and every where glabrous. *Leaves* scattered, or the uppermost only opposite, elliptical, acute, coriaceous, very

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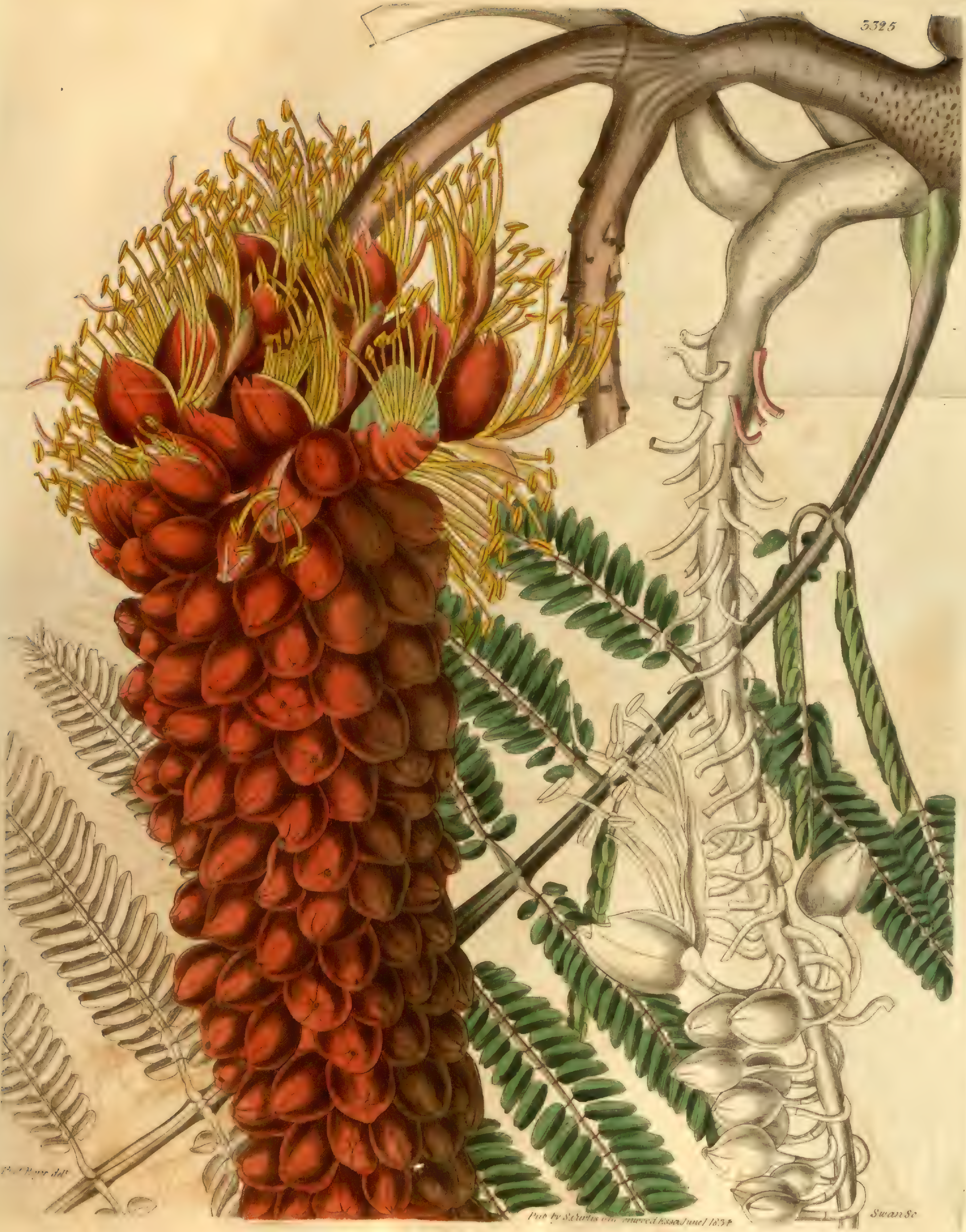
* Τροχος, a *wheel;* in allusion to the wheel-shaped cells of the fruit.

glossy, tapering below into a short petiole, marked with parallel nerves, bearing small, oblique nervelets, the margin quite entire. *Spikes* terminal or axillary, solitary or clustered. *Flowers* small, occupying nearly the whole length of the rachis, bracteated. *Bracteas* ovate, resembling the segments of the calyx. *Corolla* infundibuliform, white; tube oblong; limb of five spreading segments, bearded within. *Anthers* oblong on short filaments. *Germen* ovate, tapering into a short style. *Stigma* capitate. *Fruit* (young) a small depressed berry, with ten cells.

Fig. 1. Flower with its bracteas. 2. Corolla. 3. Stamen. 4. Pistil. 5. Young Fruit *(nat. size)*. 6. The same *magnified,* and f. 7, the same cut open. All but f. 5 more or less *magnified.*



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Pub by S. Curtis Glazenwood Essex June 1 1834

Swan Sc

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of Bojer & W.J.H. del. Pub. by S. Curtis, Glazenwood Essex. June 1 1834. Swan Sc.

COLVILLEA RACEMOSA. SPLENDID COLVILLEA.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

COLVILLEA. *Boj.*—*Cal.* magnus, oblique gibbosus, coloratus, bipartitus, *lobo superiore* maximo erecto, ventricoso, 3—4-dentato, 3—4-nervo; *inferiore* minore lineari-lanceolato. *Corolla* 5-petala, subpapilionacea: *vexillum* minutum, rotundato-reniforme, convolutum, alis tectum: *alæ* obovatæ basi attenuatæ erectæ, vexillum in partem tegentes. *Carina* e petalis duobus, oblongis, liberis, basi attenuatis ciliatis, assurgentibus, alas excedentibus. *Stamina* 10, libera, filamentis inæqualibus basi pubescentibus: *Antheræ* supra planæ, birimosæ. *Ovarium* subsessile, lanceolatum, attenuatum, compressum. *Stylus* filiformis. *Stigma* acutum. *Legumen* rectum, turgidum, bivalve, polyspermum. *Semina* elliptica, compressa, utrinque retusa. *Cotyledones* in statu germinationis foliaceæ, planæ. *Bojer.*

Specific Name.

COLVILLEA *racemosa*. *Bojer, MSS.*

This truly splendid plant, worthy of bearing the name of his late Excellency Sir CHARLES COLVILLE, Governor of the Mauritius, to whom it was dedicated by its discoverer, is probably a native of the east coast of Africa: but was only seen by Professor BOJER in 1824, in the Bay of Bombatoe, on the western coast of Madagascar, where a single tree was cultivated by the inhabitants. That indefatigable naturalist raised it from seeds which he took to the Mauritius, where it has perfectly succeeded: and we may soon expect to add this most ornamental plant to the stoves of our own country. Its flowering season in the Mauritius is April and May. I am indebted to Professor Bojer for the excellent drawing, of which a portion is here represented, as well as for the description and for specimens.

Descr. *Tree* fourty to fifty feet high, with the general aspect of Poinciana *regia*, (Bot. Mag. t. 2884,) but with a thicker trunk and more ample foliage: the *bark* is reddish-grey, smooth; the *wood* white, rather fragile. *Branches* very long and spreading, rounded, grey, the younger ones greenish, rough with elevated points. *Leaves* alternate, remote, very patent, the lower ones reflexed, bipinnate with twenty to thirty pairs, oblong-oval in their circumscription, three feet long: pinnæ opposite, four inches long, with twenty to twenty-eight pairs of horizontal, linear *leaflets*, half an inch long, shorter at the base and at the extremity of the pinnæ, rather unequal, on very short petiolules, slightly pubescent. The common *petiole* is swollen at the base, channelled above, green or purplish. *Stipules* minute, setaceous, deciduous. *Flowers* bright scarlet, racemose. *Racemes* from four to twelve, partly arising from the apex of the branches and partly from the axils of the superior leaves, a foot and a half long, simple or branched. *Peduncles* rounded, clothed with ferruginous down, often warted. *Pedicels* crowded, jointed upon the stem, reddish: *bracteas* coloured, very deciduous. The buds are obliquely globose, somewhat acute, beautifully velvety, red. *Calyx* greenish within, including the alæ and vexillum. The *vexillum* is singularly small, convolute, and almost wholly covered by the alæ: it has a broad nerve with a white downy tubercle at the base, and is of a yellowish colour, marked with veins. Of the ten free stamens, three are inserted beneath the vexillum, two under the alæ, one under the carina, and the rest beneath the ovary. *Ovary* glabrous green, ending in a very long style.* (Bojer.)

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* The description, from which this is extracted, was read at a meeting of the Natural Hist. Society of the Mauritius, by Professor W. Bojer, the Vice-President.

Tab. 3325. Portion of a flowering branch, *nat. size*.

Tab. 3326. Fig. 1. Flower. 2. Flower, from which the Calyx is removed. 3. Vexillum. 4. The same spread open. 5. One of the Alæ. 6. 6. Anthers. 7. Pistil, *magnified*. 8. Legumen *nat. size*.

3327

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MILLA UNIFLORA. SINGLE-FLOWERED MILLA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Corolla infundibuliformis, tubo recto, limbo sexpartito, plano; laciniis alternis angustioribus. *Antheræ* subsessiles, fauci insertæ, oblongæ. *Germen* pedicellatum. *Stylus* filiformis, exsertus, stigmatibus 3, globosis, villosis. *Capsula* oblongo-triangularis, trilocularis. *Semina* ovata, acuta. *Cav.*

Specific Character and Synonym.

MILLA *uniflora;* scapo unifloro, spatha bifida inæquali, capsula clavata apice depresso *(Grah.),* staminibus alternis longioribus.

MILLA uniflora. *Graham in Jameson's Ed. Phil. Journ. Dec.* 1832.

The credit of discovering this very pretty plant is due to Dr. GILLIES, from whom we possess specimens, gathered in 1820, "on banks near Buenos Ayres," and marked "*Milla,* Nov. Sp." In June, 1832, Mr. NEILL received roots from the same place, gathered by Mr. TWEEDIE, which flowered in the greenhouse at Canon Mills, in December of the same year, and again in March, 1834, when specimens and a drawing by Mr. M'NAB, were communicated by Dr. GRAHAM, who is assuredly correct in keeping it distinct from the Mexican MILLA *biflora,* the only other species known to exist. The stamens alone would afford a distinguishing character, in *biflora* being constantly equal, and in our plant as regularly alternately smaller.

The Genus was named by CAVANILLES, in honour of JULIAN

Milla, head gardener at the Royal Garden at Madrid. When bruised, our species yields the most powerful smell of garlic.

Descr. "*Bulb* ovate, forming new ones at the base. *Leaves* (one foot long, two and a half lines broad) all radical, glaucous, glabrous, linear, concave in their upper surface, keeled below, blunt. *Scape* (four to five inches high) erect, glabrous green, very slightly compressed. *Spatha* bidentate, segments connivent, rather unequal in length, and the division extending farther down on one side than the other. *Peduncle* generally longer than the spatha, nearly cylindrical, green. *Corolla* (one inch and a half across when expanded) six-cleft, marked from the base of the tube to the apex of the segments with six dark lines which are purplish-green behind, lilac in front; *tube* clavate, naked; segments of the limb rather longer than the tube, spreading, ovate, acute, their sides involute at the apex, imbricated, the inner segments the narrowest. *Stamens* six, of unequal length, adhering to the tube to unequal heights, subcompressed; *anthers* yellow, oblong, bifid at both ends, lobes acute; *pollen* yellow, *granules* minute. *Stigma* capitate, small, white, pubescent. *Style* included, grooved. *Germen* superior, rather shorter than the style, oblong, six-furrowed, tri-locular. *Ovules* numerous, green, placenta central. *Capsule* clavate, depressed at the apex." *Graham.*

Fig. 1. Inner view of the tube of the Flower, with the Stamens and Pistil:—*magnified.*

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Pub by S Curtis [illegible] 1 1834

GASTROLOBIUM RETUSUM. BLUNT-LEAVED GASTROLOBIUM.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Calyx 5-fidus, bilabiatus, ebracteolatus. *Petala* longitudine subæqualia. *Ovarium* dispermum, pedicellatum. *Stylus* subulatus adscendens. *Stigma* simplex. *Legumen* ventricosum. *Semina* strophiolata.—Frutex *Australasicus.* Folia *simplicia, quaternim verticillata.* Stipulæ *subulatæ, distinctæ.* Flores *flavi, in racemum ovatum terminalem dispositi. D C.*

Specific Character and Synonym.

GASTROLOBIUM *retusum;* foliis cuneatis truncatis utrinque lanato-pilosis breve petiolatis, nervo medio in setam deciduam producto, stipulis setaceis pilosis persistentibus, capitulis stipitatis terminalibus axillaribusque.

GASTROLOBIUM retusum. *Lindl. in Bot. Reg. t.* 1647. *Grah. in Ed. N. Phil. Journ.* 1834.

This pretty little shrub was first raised at the Botanic Garden, Edinburgh, in 1831, from seed brought home by Dr. LANG, from New Holland, and again in 1832, from seed communicated by her Grace the Duchess Countess of Sutherland. It first flowered in December 1833, and the same plant much more freely in March, 1834. *Graham.*

DESCR. *Shrub* erect; branches long, slender, round, pubescent, dotted with green. *Leaves* (one inch long, half an inch broad) verticillate, cuneate, truncate, reflected in the sides, covered above and below with long subappressed somewhat woolly hairs, shortly petioled, middle rib pro-

longed into a deciduous bristle. *Stipules* bristle-like, hairy, more than twice as long as the petiole, persisting. *Capitula* dense, terminal or axillary, in the latter situation eight to twelve-flowered, on peduncles (half an inch long) solitary in each axil. *Calyx* bilabiate, upper lip bifid, lower three-partite. *Corolla* twice as long as the calyx, orange-yellow, of deeper and richer colour before expansion. *Petals* slightly unequal, the vexillum rather the longest, the carina rather the shortest, on long claws; *vexillum* kidney-shaped, striated, reddish at its base; *alæ* elliptical, striated with red at the base; *keel* red, rather straight, emarginate and blunt at the apex, its petals separated at the base. *Stamens* free, inserted into the torus, imbedded within the keel; *filaments* red, glabrous; *anthers* yellow, elliptical, *pollen-granules* yellow, very minute. *Pistil* as long as the stamens, included within the keel: *Germen* hairy, green: *Style* glabrous, red, falcate, compressed laterally: *Stigma* simple, dorsal, white. *Graham.*

Fig. 1. Flower:—*magnified.*

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Pub. by S. Curtis, Glazenwood Essex. June 1. 1834.

CATASETUM TRIDENTATUM; *var.* THREE-TOOTHED CATASETUM; *var.*

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium sæpius globosum, nunc explanatum. *Sepala et Petala* subæqualia. *Labellum* crassum, carnosum, nudum, ventricosum vel explanatum fimbriatum; sub apice saccatum, obsolete trilobum. *Columna* erecta, aptera, libera, apice utrinque cirrhosa. *Anthera* subbilocularis, antice truncata. *Pollinia* 2, postice biloba vel sulcata, caudicula maxima nuda demum elastice contractili, glandula cartilaginea subquadrata.—Herbæ *terrestres vel epiphytæ, caulibus brevibus fusiformibus vestigiis foliorum vestitis.* Folia *basi vaginantia, plicata.* Scapi *radicales.* Flores *speciosi, racemosi, virides, nunc purpureo-maculati. Lindl.*

Specific Character and Synonyms.

CATASETUM *tridentatum;* foliis oblongo-lanceolatis acuminatis, perianthiis compressis conniventibus, sepalis petalisque acuminatis, labello cucullato apice tridentato. *Lindl.*

CATASETUM tridentatum. *Hook. Exot. Fl. t.* 90, 91. *Sims, Bot. Mag. t.* 155. *Spreng. Syst. Veget. v.* 3. *p.* 726. *Lindl. Gen. et Sp. Orchid. p.* 155.

CATASETUM macrocarpum? *Rich. in Kunth, Syn. v.* 1. *p.* 331.

CATASETUM Claveringi. *Lodd. Bot. Cab. t.* 364.

(β.) floribus majoribus, sepalis petalisque acutis.

CATASETUM Claveringi. *Lindl. Bot. Reg. t.* 840.

CATASETUM floribundum. *Hook. Exot. Fl. t.* 151.

(γ.) sepalis latioribus, labello flavo (tab. nostr. t. 3329.)

I entirely concur with Professor LINDLEY in the propriety of uniting his CATASETUM *Claveringi* and my C. *floribundum*

with the C. *tridentatum,* the species being exceedingly liable to vary in the size and marking of the flowers, (scarcely any two being exactly alike in these respects,) and in the number of blossoms upon a raceme. The plant now figured for which and for the drawing of the foliage, I am indebted to Mrs. C. HORSFALL, of Everton, Liverpool, was given to Mr. HORSFALL by Mr. HENRY HARRISON, who imported it from the Brazils. It has, as Mr. EVANS (the able gardener) observes, an aromatic smell, and differs from my original C. *tridentatum* in the larger flowers, and much broader sepals: and may almost be considered identical with the variety from Trinidad, of which a single flower is represented in the plate of C. *floribundum* in the Exotic Flora, f. A. The C. *tridentatum,* already given in the Bot. Magazine, has a much longer raceme and an almost entirely yellow lip. C. *Claveringi* of the Botanical Register differs chiefly in the more highly coloured blossoms and densely spotted column, while that of Mr. LODDIGES, which Professor LINDLEY refers to his *α,* is remarkable for the deep blood-coloured inner surface of the labellum.*

In all, the elastic nature of stalk of the pollen-masses is quite remarkable: in consequence of which the latter are thrown to a considerable distance, and with much force, on the anther being removed; and they then firmly adhere to whatever body they strike against, by the large glutinous gland.

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* Still another variety has, since the above was written, been also sent to me by Mrs. HORSFALL. It is remarkable for the greener hue of every part of the flower, especially of the labellum, and the much longer and stronger teeth of this latter. It may be called C. *tridentatum, δ. viridiflorum.* It was introduced from Demerara, by WILLIAM SANDBACH, Esq.

Fig. 1. Column. 2. Anther-case. 3. Pollen-masses, Stalk and Gland:—*slightly magnified.*

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W. J. H. delᵗ

Pub by S. Curtis Glazenwood Essex June 1 1834.

Swan Sc

PIMELEA HYPERICINA. HYPERICUM-LEAVED PIMELEA.

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Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—THYMELÆÆ.)

Generic Character.

Perianthium infundibuliforme, limbo 4-fido, fauce esquamatâ. *Stamina* duo, fauci inserta, laciniis exterioribus opposita. *Stylus* lateralis. *Stigma* capitatum. *Nux* corticata, raro baccata. *Br.*

Specific Name and Character.

PIMELEA *hypericina;* involucris octophyllis, foliolis lato-ovatis acutis utrinque pedunculoque subclavato villoso-sericeis; floribus polygamis, perianthiis extùs lanato-villosis, (hermaphroditi staminibus exsertis stylo longioribus: feminei stylo elongato glabro, tubo duplo longiore,) stigmate crassè ciliato, foliis elliptico-oblongis, oblongo-lanceolatisve acutis glabris venosis, subtus glauco-pallidis. *Cunn.*

An ornamental, slender shrub, rising three or more feet in height, and bearing capitula of hermaphrodite flowers on a different plant from that which appears to produce heads of female flowers only,—the almost sessile anthers with which those perianths are furnished, being (in all examined) wholly imperfect. In the flowers of the former, the stamens extend beyond the mouth of the tube, and are uniformly longer than the style. Among them, however, are occasionally to be observed, a few perianths, wherein the anthers, inserted on abbreviated filaments, are abortive, and where these occur, the styles are considerably elongated to be convenient to receive the pollen of the well-developed anthers of the other, more perfect flowers.

This hitherto unpublished plant, which belongs to Mr. BROWN's first section of the Genus, was discovered by Mr. WILLIAM BAXTER in the neighbourhood of King George's Sound. It has much of the habit and strength of growth of

P. *ligustrina* of M. Labillardiére, an inhabitant of shaded, subhumid woods in New South Wales and Van Diemen's Land; but that species differs essentially in having an involucrum of four equal-sized leaves, hermaphrodite flowers simply, and a stigma perfectly smooth.

When treated as a hardy greenhouse plant, it thrives vigorously, and in its season puts forth its flower-heads in abundance. Like other congeners, it blossoms in the spring, and, in the Royal Gardens at Kew, whence flowering specimens were liberally afforded by Mr. Aiton, it was raised from seeds received from New South Wales, soon after the return to Port Jackson of its indefatigable discoverer, from his *last* voyage of Botanic enterprise to the coasts of Southern Australia, in 1829.

Descr. A tall, evergreen *shrub*, with a few smooth, twiggy branches; the older ones, having a bright brown-coloured bark. *Leaves* opposite and decussate, spreading, distant on the branch, inserted on very short, thick petioles, elliptically oblong, and oftentimes much narrower, acute, throughout very smooth, veined, of a darkish-green on the upper side, and glaucous pale hue beneath. *Flowers* numerous, collected into a rather densely crowded head, upon a terminal peduncle, gradually thickening upwards. *Involucre* very silky throughout, of eight leaves, of which frequently, the four inner are smaller. These flowers are polygamous, having hermaphrodite and female flower-heads, on distinct plants. In the former, the stamens are exserted, and longer than the fully developed *style*, which in some instances extends but little beyond the mouth of the perianth. In the latter, the style is exserted, smooth, double the length of the tube of the flower (within which are inserted on very short filaments, two abortive anthers) with the capitated *stigma* of the Genus, which in our plant is grossly ciliated. *Perianths* of both, externally very villous, articulated, base persistent, dilated and hairy, enclosing loosely the *ovarium* which is oval, green, having a pencil-like tuft of hairs at its apex, and inserted on a pilose receptacle.

Another, and even rarer species, in the English gardens, has been in flower during the last spring at Kew. It proved to be P. *clavata*, Labill., a plant originally discovered, many years ago, in Van Diemen's Land, and afterwards observed on the south coast of New Holland by Mr. Brown; and from the desert native shores of others of its kindred, King George's Sound, was introduced to the Royal Gardens in 1823. It forms a large shrub of robust habit; produces diœcious flowers, and in its native country, the fruit it perfects, is a small, baccated drupe. Its rather myrtle-like leaves, glossy above and villous on the under side, may give it some claim to a place in a general collection of exotics; but we fear, a plant producing flowers in very small heads, and certainly the least attractive of all the known species of this, in many other respects, much esteemed Genus, furnishes too little, to secure the notice of the cultivator of the gay, and gaudy-flowering vegetables of the present day.

Fig. 1. Hermaphrodite Flower. 2. Head of Female Flowers. 3. Single Female Flower. 4. Portion of the same, showing an abortive Stamen: *magnified.*

W. J. H. del.

Pub. by S. Curtis. Glazenwood Essex. June 1.1834.

Swan Sc.

ARABIS VERNA. EARLY-FLOWERING WALL-CRESS.

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Class and Order.

TETRADYNAMIA SILIQUOSA.

(Nat. Ord.—CRUCIFERÆ.)

Generic Character.

Siliqua linearis; valvis planis medio uninerviis. *Semina* in quoque loculo uniserialia, ovalia aut orbicularia, compressa. *Cotyledones* planæ (o=). *Flores* albi aut rarius rosei. *D C.*

Specific Character and Synonyms.

ARABIS *verna;* foliis grosse dentatis pubescenti-hispidis, caulinis cordatis amplexicaulibus infimis petiolatis, pedicellis longitudine calycis, siliquæ valvis convexis, stigmate subemarginato.

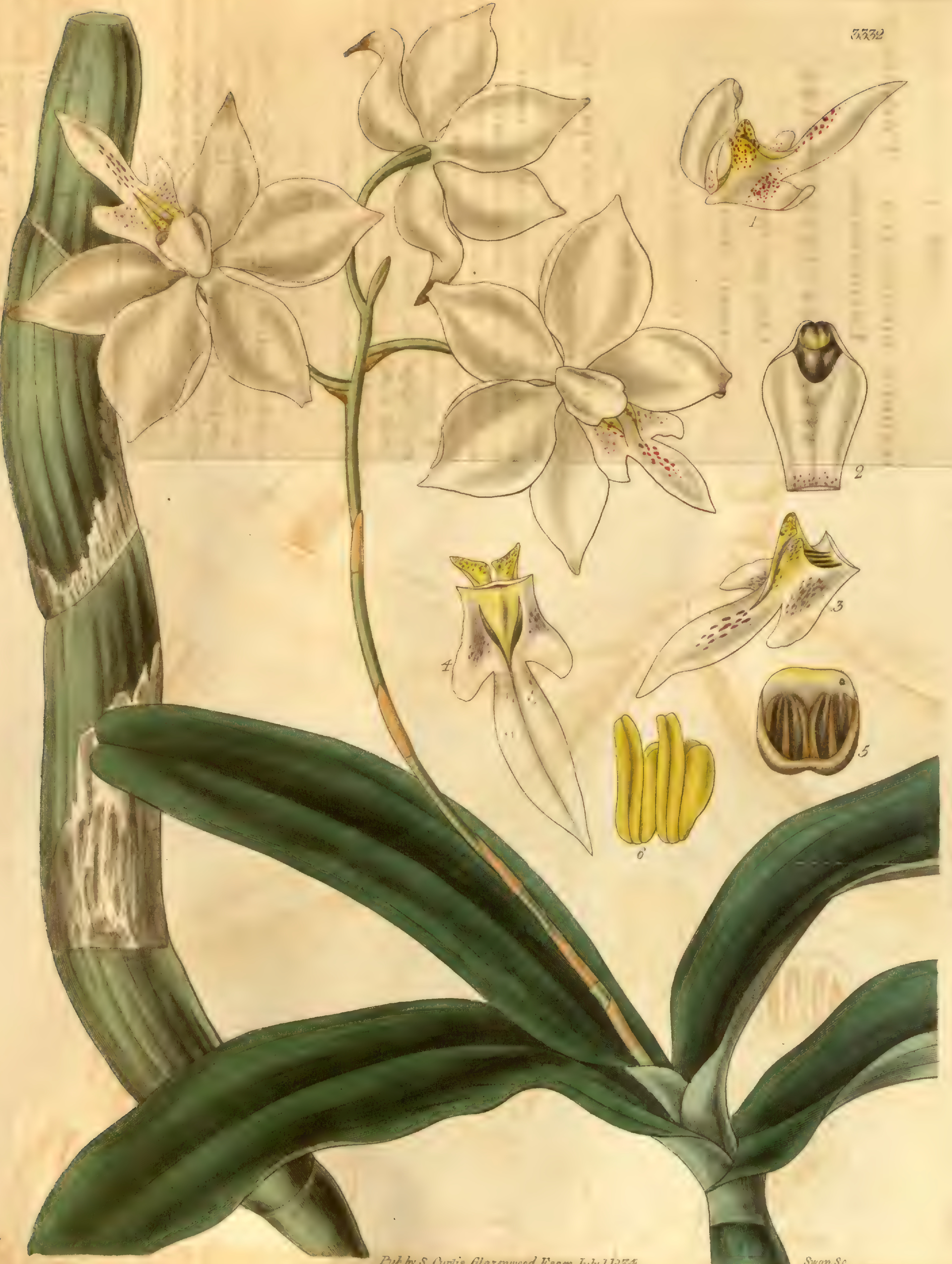
ARABIS verna. *Br. in Hort. Kew. ed.* 2. *v.* 4. *p.* 105. (non Desf.) *De Cand. Prodr. v.* 1. *p.* 142. *Spreng. Syst. Veget. v.* 2. *p.* 890.

HESPERIS verna. *Linn. Sp. Pl. p.* 928. *Sibth. Fl. Græc. t.* 641.

An extremely pretty annual, especially when cultivated in tufts, the very vivid purple of the blossoms making amends for the small number of flowers on each individual specimen; and of these few I have never seen more than one expanded at the same time. It is an inhabitant of the south of France and of Europe generally, as well as the north of Africa, according to DESFONTAINES. Sir JAMES SMITH describes it as flowering abundantly about Naples, in March, and seeming to occupy the place of our ARABIS *(Sisymbrium) thaliana,* which, however, it much excels in beauty. In the Glasgow Botanic Garden it flowers at the same season as in Naples; but under the protection of a frame, during the previous winter months. It is, however, well suited to ornament rock-work, when it would probably produce its blossoms a few weeks later. The seeds were communicated by Professor TENORE, from Naples.

DESCR. *Root* small, annual. *Stem* erect, three or four inches high when in flower, much elongated in fruit, usually simple, more or less slightly hispid with bi-tripartite hairs. *Leaves* also rough with similar hairs: the lower ones spathulate, rather crowded, the rest remote, cordate, amplexicaul, all coarsely toothed. *Flowers* three to four, terminal. *Pedicels* smooth, short. *Calyx* of four linear-oblong, erect, hairy leaflets. *Petals* obovate-spathulate, bright purple, tapering gradually into pale yellow claws. *Stamens*, the four longer ones much dilated, the two shorter ones with a distinct tooth below the middle. *Anthers* small, yellow. Young *fruit* linear, elongated, slightly hispid. *Stigma* scarcely two-lobed.

Fig. 1. Flower. 2. Flower from which the Calyx and Corolla are removed. 3. Petal:—*magnified.*



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Swan Sc

EPIDENDRUM BICORNUTUM. TWO-HORNED EPIDENDRUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala patentia, subæqualia. *Petala* sepalis æqualia, v. angustiora, rariùs latiora, patentia vel reflexa. *Labellum* cum marginibus columnæ omninò vel parte connatum, limbo integro v. diviso, disco sæpiùs calloso, costato vel tuberculato; nunc in calcar productum ovario accretum et cuniculum formans. *Columna* elongata: clinandrio marginato, sæpè fimbriato. *Anthera* carnosa, 2—4-locularis. *Pollinia* 4, caudiculis totidem replicatis annexa. Herbæ *(Americanæ) epiphytæ,* caule *nunc apice vel basi pseudobulboso, nunc elongato apice folioso.* Folia *carnosa, rarissimè venis elevatis.* Flores *spicati, racemosi, corymbosi, v. paniculati, terminales v. laterales. Lindl.*

Specific Name and Character.

EPIDENDRUM *bicornutum;* labello libero trilobo, lobo intermedio elongato lanceolato acuto, basi intus alte cornuto, sepalis petalisque æqualibus lato-ellipticis acutis concavis, bulbo elongato subcauliformi apice folioso, foliis paucis lineari-oblongis obtusis coriaceis, pedunculo terminali, racemo paucifloro.

For the opportunity of figuring this charming orchideous plant, a native of Trinidad, I am indebted to Mr. JOSEPH COOPER, of Wentworth Gardens, where it produced its large and highly fragrant blossoms (smelling like those of the Persian Iris) in April, 1834. To that zealous and excellent cultivator it was sent by the Messrs. SHEPHERD,

of Liverpool, who introduced it to the stoves of Europe. It was marked "*Cattleya, n. sp.*," and it has many points in common with that Genus, especially in the general habit, the large flowers, and in much of their structure, but differing remarkably in the labellum and the shortness of the column. Wishing, however, to have the opinion of Professor LINDLEY, he informed me, with his accustomed readiness, "your Trinidad orchideous plant is certainly a new species; but I think it cannot be separated from EPIDENDRUM. The only distinction between it and that Genus consists in the labellum being distinct from the column: but you will find various degrees of separation between those parts in E. *asperum, venosum, vitellinum,* and *bidentatum,* which nobody can doubt are genuine EPIDENDRA:—and I have from the Havannah a small-flowered species without leaves or stem, the structure of whose lip, plates, and lobes and all, is quite yours in miniature. Should you, however, be of opinion that it nevertheless must form a new Genus, its character will have to depend upon the large size of the *petals,* and the slight adhesion of the sepals at their base. The latter is, however, but a fallacious character, and the former occurs in what I consider true EPIDENDRA:"—In this opinion, expressed by one whose judgment is so valuable, I need hardly say, I entirely concur.

DESCR. *Roots* consisting of numerous fibres, about the thickness of a crow-quill. *Stem* (or *bulb*) nearly a foot high, subcylindrical, but swollen in the middle, jointed, obscurely striated, and marked with the scars of the old foliage, bearing at the extremity about four oblong, or somewhat strap-shaped, distichous, coriaceous, scarcely striated *leaves.* From the base of the upper one of these, and consequently from the extremity of the stem, arises the *peduncle,* a span long, jointed, and in part sheathed with small membranaceous scales, bearing a raceme of three to four large and highly fragrant flowers. *Sepals* and *petals* very much spreading, pure white, broadly ovate, rather acute; the former rather smaller, and combined at the base, the latter more concave. *Lip* standing forward, sessile on the base of the column, and broader than it at the base, spreading, three-lobed, white, with a few purple, small spots, the side lobes short, intermediate one elongated, lanceolate, entire: the disk bears two very large conical divaricating tubercles, which are hollow beneath. *Column* short, white, with a few purple spots at its base within, semi-terete, dilated upwards, and somewhat winged. *Anther* hemisphærical, inserted a little below the extremity of the column and in front of it. *Pollen-masses* four, yellow, in pairs, the *caudiculæ* replicate and united in pairs. *Germen* green above, white below, where it tapers into the footstalk.

Fig. 1. Side view of the Column and Lip. 2. Front view of the Column. 3. Upper side of the Lip. 4. Under side of ditto. 5. Inside view of the Anther-case. 6. Pollen-masses removed from the Anther-case:—more or less *magnified.*

W. Curtis delᵗ

Pub by S Curtis Glazenwood Essex July 1 1834.

Swan Sc

VERBENA CHAMÆDRIFOLIA. SCARLET-FLOWERED VERVAIN.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—VERBENACEÆ.)

Generic Character.

Cal. 5-fidus, dente unico subbreviore. *Cor.* limbus irregulariter 5-lobus. *Stam.* inclusa. *Utriculus* 4-spermus, cito rumpens, ut maturi fructus caryopses sistant. *Spr.*

Specific Character and Synonyms.

VERBENA *chamædrifolia;* procumbens, hispido-pilosa, foliis oblongo-lanceolatis grosse serratis, corymbis pedunculatis multifloris, calycibus tubulosis hispidis, corollæ tubo elongato laciniis emarginatis cuneatis.
VERBENA chamædrifolia. *Juss. in Ann. du Mus. v. 7. p.* 73. *Spreng. Syst. Veget. v.* 2. 748. *Hook. in Bot. Miscell. v.* 1. *p.* 167. *Sw. Br. Fl. Gard. t.* 9.
VERBENA veronicifolia. *Sm. in. Rees Cycl.*
VERBENA Melindres. *Gill. in Bot. Reg. t.* 1184.
ERINUS Peruvianus. *Linn. Sp. Pl. p.* 576.
LYCHNIDEA veronicæ folio, flore coccineo. *Feuillée, Per. v.* 3. *p.* 36. *t.* 25.

No plant with which we are acquainted exhibits flowers of so brilliant and dazzling a scarlet as the present: and although a native of the Banda Orientale, the Plata, and the whole of the Pampas of Buenos Ayres, as far as the provinces of Cordova and St. Luis, it is found to flourish in the open air with us and to bear our moderate winters unhurt. It should, however, as we may judge from the character of the soil in its native country, and indeed from what we know of the habit of almost the whole Genus, have its roots well drained. It is then too, better able to repel the effects of our severer frosts. It flowers during the whole summer, and if planted in patches of considerable size, it is not possible to conceive the splendour of its appearance without seeing it.

Descr. Perennial and suffruticose: its branches straggling, procumbent and almost hispid. *Leaves* rough with hairs, opposite, oblongo-lanceolate, more or less attenuated at the base, somewhat wrinkled on the surface. *Spike* of flowers forming a sort of *corymb* when in perfection, and of the richest scarlet. *Calyx* tubular, hispid. *Tube* of the *Corolla* almost twice the length of the calyx, nearly white: its limb of five rather large, spreading, cuneate, and emarginate segments. *Stamens* included within the tube.

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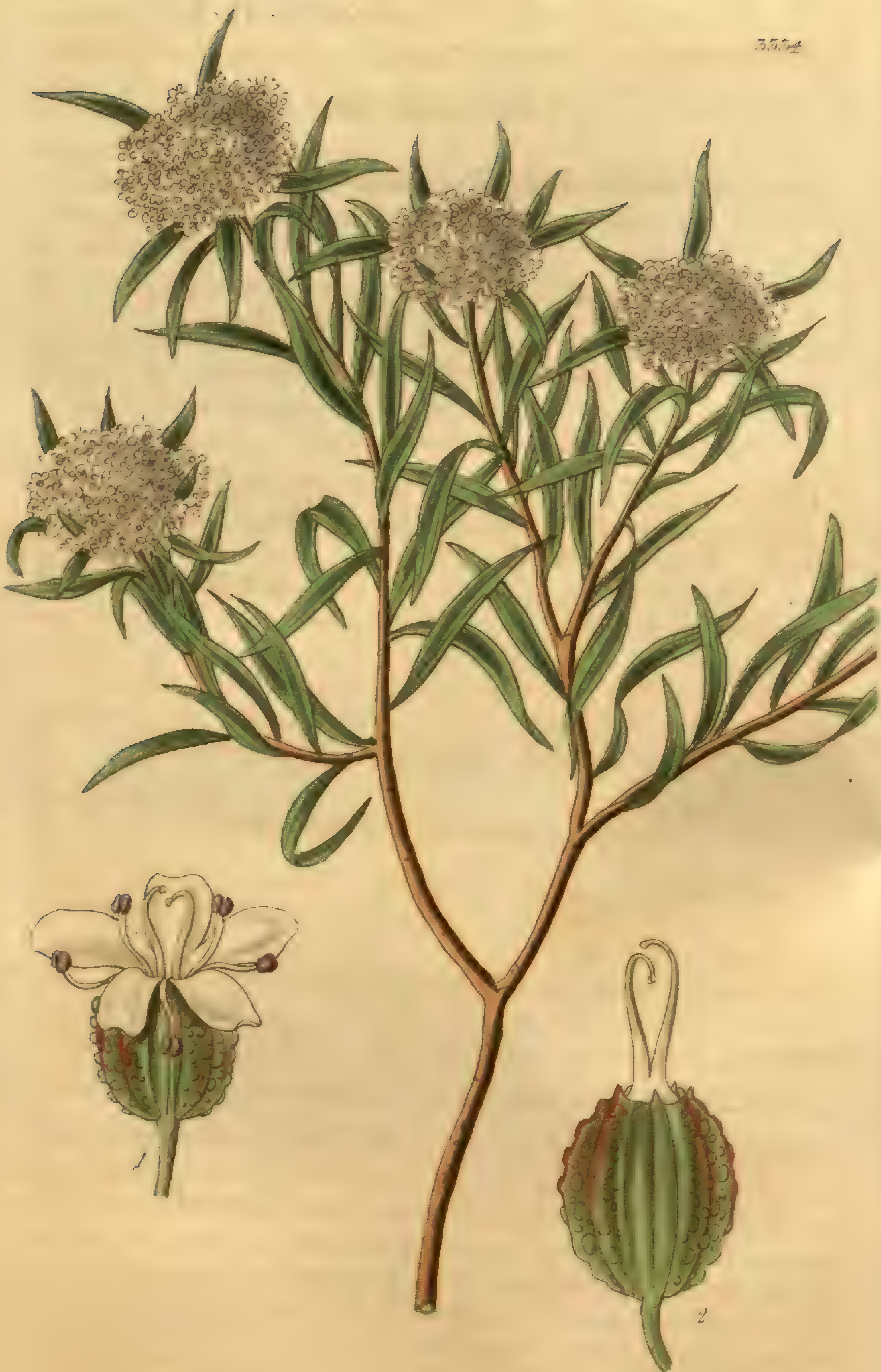

W. J. H. del.

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wan Sc

TRACHYMENE LANCEOLATA. LANCE-LEAVED TRACHYMENE.

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Class and Order.

PENTANDRIA DIGYNIA.

(Nat. Ord.—UMBELLIFERÆ.)

Generic Character.

Calycis margo 5-dentatus. *Petala* elliptica, integra, acutiuscula, apice recto, æstivatione subvalvata. *Styli* divergentes. *Fructus* à latere compressus contractusque didymus. *Mericarpia* gibbo-convexa evittata 5-juga, jugis 3 dorsalibus valleculisque muricato-tuberculatis, lateralibus marginantibus. *Carpophorum* indivisum. *Semen* gibbo-convexum anticè planiusculum.—Herbæ *aut* suffrutices, *omnes è Novâ Hollandiâ.* Umbella *composita pluriradiata.* Umbellulæ 3—12-*floræ.* Involucra *polyphylla.* *D C.*

Specific Character and Synonyms.

TRACHYMENE *lanceolata ;* fruticosa, foliis lanceolatis coriaceis glabris nervosis utrinque attenuatis ; umbellâ confertâ multiflorâ.

TRACHYMENE lanceolata. *Spreng. Syst. Veg. v.* 1. *p.* 879. *De Cand. Prodr. v.* 4. *p.* 73.

AZORELLA lanceolata. *Labill. Nov. Holl. v.* 1. *p.* 74. *t.* 99.

The present Genus, of which the species were previously united with AZORELLA by LABILLARDIÉRE, was constituted by RUDGE ; its name being derived from τραχυς, *rough,* and ὑμην, a *membrane,* on account of the tuberculated coat of the fruit. It contains two groupes or divisions ; one (PLATYMENE, D C.) characterized by the remarkably compressed, herbaceous stems, and extremely minute divided leaves ; the other (DENDROMENE, D C.) distinguished by the rounded, fruticose stems, and conspicuous, entire leaves.

Our plant, it will be at once seen, belongs to the latter section, and has at first sight so little of the character of an umbelliferous plant, as easily to deceive any but an observing Botanist. From its coriaceous leaves and frutescent stems, and crowded, white flowers, it might almost be taken for a DIOSMA. I am indebted to Mr. AITON for the specimen here represented. It is a native of Port Jackson, where it inhabits dry barren, rocky situations. "With us," Mr. ALLAN CUNNINGHAM writes from Kew, "it is a hardy greenhouse plant, and was first introduced to our culture in the King's Gardens, from a solitary individual springing up in a box of ORCHIDEÆ received from New South Wales in 1825. In that collection, it makes a variety among other compatriots; where, although it belongs to a family possessing few external attractions to the Horticulturist; it nevertheless recommends itself to the care of the cultivator, not less by the freedom of its growth, than by the ready disposition it exhibits to produce its ample umbels of flowers at various seasons."

DESCR. A *shrub*, seldom more than two feet high, of diffuse, branching, twiggy habit, clothed with brownish bark. *Leaves* chiefly on the younger branches, alternate, lanceolate, attenuated at the base, and sharply acuminated at the extremity, coriaceous, glabrous, entire, marked with parallel nerves. *Umbels* terminal, compound. *Involucres* and *involucels* scarsely different from the leaves, the former, however, much longer than the umbels. *Limb* of the *calyx* consisting of five sharp teeth. *Petals* five, spreading, white, elliptical, entire. *Stamens* five. *Filaments* spreading: *anthers* globose. *Styles* two, subulate: *Stigmas* capitate. *Fruit* elliptic, approaching to orbicular, compressed, with three broad, dorsal, ridges, much tuberculated; the two lateral ones smooth.

Fig. 1. Flower. 2. Young Fruit: *magnified.*

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[illegible] [illegible] 1834 [illegible]

RIBES SANGUINEUM. RED-FLOWERED CURRANT.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—GROSSULARIEÆ.)

Generic Character.

Calyx 5-lobus, laciniis plus minùsve coloratis. *Pet.* 5 parva albida lutea vel rubra. *Stam.* 5, rarissimè 6, filamentis liberis. *Styli* 1—2—3—4-fida. *Bacca* unilocularis, receptaculis lateralibus. *Semina* arillata (an in omnibus ?) oblonga compressa. *D C.*

Specific Character and Synonyms.

RIBES *sanguineum;* inerme, foliis cordatis subquinquelobis serratis venosis supra glariusculis subtus villoso-tomentosis, racemis laxis pubescentibus folio duplo longioribus, calycibus tubuloso-campanulatis laciniis oblongis obtusis patentibus petala (rubra) integerrima superantibus, bracteis lineari-oblongis, baccis turbinatis hirsutis.

RIBES sanguineum. *Pursh, Fl. Am. v.* 1. *p.* 164. *Smith, in Rees' Cycl. Roem. et Sch. Syst. Veget. v.* 5. *p.* 497. *Spreng. Syst. Veget. v.* 1. *p.* 811. *Dougl. in Hort. Trans. v.* 7. *p.* 509. *t.* 13. *Bot. Reg. t.* 1349. *Hook. Fl. Bor. Am. v.* 1. *p.* 234.

RIBES malvaceum. *Sm. in Rees' Cycl.*

Few, if any of the numerous interesting and hardy plants, introduced to our gardens by Mr. DOUGLAS from the North-west coast of America, are more truly deserving of cultivation, and of a place in our borders and in our shrubberies, than the subject of the present plate. Its original discoverer was Mr. MENZIES, and it has since been gathered by

Mr. Douglas, by Messrs. Lewis and Clarke, and by Dr. Scouler, in countries extending from lat. 48°, in California, to 52° N. Most of the species of this Genus hitherto known to us, recommend themselves by the excellence of their fruit: their flowers being insignificant, both as to size and colour: here we have a species remarkable for the fine purplish red of the numerous clusters of flowers and the delicate green of the copiously veined foliage. But in proportion to the beauty of the flowers, in this instance, is the worthlessness of the fruit, which, though it has not, that I am aware, been produced in this country, is described by Mr. Douglas as "turbinate, brownish-black, bitter, having a tough, leathery, thick skin, with numerous minute, angular seeds, adhering together by a small portion of limpid, viscid, mucus, and completely destitute of the pulpy substance common to most species of the tribe." The whole plant possesses the peculiar fragrance of our black currant, Ribes *nigrum*. It is easily increased by cuttings, thriving well even in the West of Scotland, and in the early spring, before the foliage appears, it is rendered conspicuous by the copious racemes of flowers, which last till the full expansion of the leaves.

Descr. An upright *shrub*, with the numerous branches clothed with a brown bark. *Leaves* broadly cordate, 5-lobed, unequally serrated, copiously reticulated with veins, of a bright, pleasant, velvety green, and almost glabrous on the upper side, paler and downy beneath. *Petioles* glandular. *Peduncles* and *Pedicels* purplish, glandular, as are the oblong, rather large bracteas. There are besides two small *bracteas* at the base of the germen. *Flowers* bright rose-red. *Calyx* tubular, externally, as well as the inferior germen, glandular: *Segments* of the limb oblong, patent, obtuse. *Petals* obovate, entire, erect, red, shorter than the calyx. *Stamens* as long as the petals. *Style* cloven at the apex. *Stigma* small, capitate.

Fig 1. Flower: *magnified.*

3336

J.H. delt Pub by S. Curtis Glazenwood Essex July 1 1834. Swan Sc.

MIMULUS LUTEUS, *var.* VARIEGATUS. YELLOW CHILIAN MONKEY-FLOWER, *var.*

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINEÆ.)

Generic Character.

Cal. prismaticus 5-dentatus. *Cor.* subcampanulata, limbo $\frac{2}{3}$, lobis subæqualibus. *Stigma* bilamellatum. *Dissepimenta* lateribus placentifera. *Spr.*

Specific Character and Synonyms.

MIMULUS *luteus;* caule (erecto vel) decumbente glabro, foliis dentatis supra pubescentibus (v. glabris) superioribus sessilibus ovatis, inferioribus petiolatis, pedunculis filiformibus folio longioribus, corolla calyce multoties majore, laciniis transversis, palato barbato. *Lindl.*

MIMULUS luteus. *Linn. Sp. Pl. p.* 884. *Spreng. Syst. Veg. v.* 2. *p.* 799. *Lindl. in Bot. Reg. t.* 1030. (non Bot. Mag.)

GRATIOLA foliis subrotundis, &c. *Feuill. Per. p.* 745. *t.* 34.

(α.) *rivularis;* caulescens, multiflorus. *Lindl. l. c.*

(β.) *alpinus;* subacaulis, uniflorus, foliis minoribus. *Lindl. l. c.*

(γ.) *variegatus;* caule erecto, corolla pallide flava, segmentis omnibus purpureis. (Tab. nostr. 3336.)

MIMULUS variegatus. *Lodd. Bot. Cab. t.* 1872.

This is a very beautiful plant, quite hardy and deserving a place in every garden, flowering as it does almost the whole summer through. Our figure does no justice to the entire plant, for, as each branch only bears one expanded flower at a time, unless the whole could be represented with

its several flowering branches, its real merits cannot be estimated. Our plants in the Glasgow Botanic Garden were derived from Mr. LODDIGES, who received them from Chili: and published them as a species under the name of M. *variegatus;* but after a most careful examination and comparison, I am forced to the conclusion that it is not specifically distinct from M. *luteus*, which is probably a very variable plant. Our native specimens have the segments of the flower sometimes spotless, sometimes with a single spot confined to the lower segment, at others apparently, as in the present case, having each segment stained with a large purple spot.

DESCR. *Root* perennial. *Stem* herbaceous, branched from the base, erect, or with the side branches more or less decumbent, rounded, purple upwards. *Leaves* broadly ovate, sometimes nearly orbicular or approaching to rhomboidal, coarsely toothed with about five nearly parallel nerves, the margin often reddish; the lowermost tapering into a long footstalk, the uppermost sessile. *Peduncles* axillary, solitary, opposite, purple. *Flower* large, handsome. *Calyx* tinged with purple. *Corolla* pale lemon-colour, the palate of two, deep yellow, hairy prominences, the segments of the limb each with a large purple blotch, the throat dotted with purple.

Fig. 1. Calyx and Pistil. 2. Pistil:—*magnified.*

3337

W.J.H. del.^t

Pub by S. Curtis Glazenwood Essex July 1 1834.

Swan Sc

ACACIA ELONGATA. SLENDER CURVED-LEAVED ACACIA.

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Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum bivalve. *D C.*

Specific Character and Synonyms.

ACACIA *elongata;* stipulis subnullis, ramulis angulatis, phyllodiis lineari-falcatis glabris longitudinaliter trinerviis, mucrone calloso terminatis, margine superiore ad basin uniglandulosis, capitulis axillaribus solitariis ternisve, pedicellis canescentibus phyllodiis multoties breviori-bus, corollis 5-fidis, stylo elongato staminibus duplo longiore. *All. Cunn.*

ACACIA elongata. *De Cand. Prodr. v.* 2. *p.* 451. *Don's Syst. of Gard. v.* 2. *p.* 403. *n.* 36.

This slender and graceful species of ACACIA is frequent on the Blue Mountains of New South Wales, and it also inhabits rocky hills in the interior to the westward of Port Jackson, where it was originally discovered during the first expedition of Mr. OXLEY on the Lachlan river, in 1817; but was not introduced to the English gardens till 1823, when plants were raised at Kew from seeds sent by Mr. ALLAN CUNNINGHAM. Mr. AITON obligingly communicated the specimens from which our drawing was made in full flower, in April, 1834.

DESCR. A slender *shrub,* with drooping angular *branches,* of which the younger ones are green, glabrous. *Leaves* or rather *phyllodia* alternate, three inches or more in length, linear, acute, with a callous point, falcate with three elevated, longitudinal lines on each side, and an oblong gland on the upper edge near the base. *Peduncles* rather more than half an inch long, downy, solitary, or two or three together, from the axils of the leaves, each bearing a globose head of rather deep yellow flowers, about the size of a pea, but inodorous. The number of such heads is very considerable on the branches, giving them a lively appearance. Each minute blossom has a *calyx,* of five or more deep segments, and a *corolla* of five or more lobes. *Stamens* numerous, shorter than the slender style.

Fig. 1. Single Flower. 2. Leaf:—*magnified.*

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H.del. Pub by S. Curtis Glazenwood Essex July 1 1834 Swan Sc

ACACIA UMBROSA. SHADY ACACIA.

* * *

Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum, bivalve. *D C.*

Specific Character and Synonyms.

ACACIA *umbrosa;* phyllodiis obliquè ovali-lanceolatis subfalcatis glabris, basi apiceque sphacelatis attenuatis bi- vel obsoletè trinerviis, margine superiore juxta basin uniglandulosis, racemis axillaribus terminalibusve patentibus dimidium phyllodii æquantibus, capitulis distinctis pedicello brevioribus, caule arborescenti. *All. Cunn.*

ACACIA umbrosa. *Cunn. in Don's Syst. of Gard. vol.* 2. *p.* 405. *n.* 61. *Loud. Hort. Brit. p.* 407.

The ACACIA here figured is derived from the same source as that represented in our last plate; namely, from the Royal Gardens of Kew, which stand unrivalled for their collection of South African and Australian Plants, those from the latter interesting and remote country, being chiefly obtained through the exertions of ALLAN CUNNINGHAM. By him ACACIA *umbrosa* was introduced in 1823. " It delights in dry shaded woods in New South Wales, in the mountainous districts on the coast; at the Illawarra, and elsewhere." It flowers in the spring, and its blossoms are powerfully fragrant.

DESCR. A *Tree,* in its native country attaining a height of twenty-five feet, glabrous in every part. Young *branches* green. *Leaves,* or *phyllodia,* four or five inches long, obliquely oval or oblong-lanceolate, slightly acuminated at the summit, attenuated at the base, marked with two or three strong nerves, which send off lesser oblique ones; and the upper margin, a little above the base, has a small, oblong *gland.* *Racemes* axillary, erect, shorter than the *phyllodia,* bearing many globose heads of fragrant, pale yellow blossoms. *Calyx* brown, and, as well as the *corolla,* four-lobed. *Stamens* numerous.

Fig. 1. Flower: *magnified.*

3339.

Sowerby. del.ᵗ

Pub. by S. Curtis. Glazenwood. Essex Aug.ᵗ 1. 1834.

SCHINUS MOLLE. PERUVIAN MASTICK-TREE.

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Class and Order.

DIŒCIA DECANDRIA.

(Nat. Ord. TEREBINTHACEÆ.)

Generic Character.

Flores dioici. *Calyx* 5-partitus. *Petala* 5. *Stamina* 10. *Rudimentum* ovarii. *Filamenta* sterilia. *Ovarium* 1 sessile. *Stylus* o. *Stigmata* 3—4 in punctum collecta. *Drupa* globosa, epicarpio tenui, carne pauca, nucleo 1-spermo osseo in peripheria lacunis 6 vacuis excavato. *Semen* funiculo e pariete laterali orto suspensum, compressum, exalbuminosum, cotyledonibus planis, radicula infera.—Frutices *aut* Arbusculæ *Americanæ balsamiferæ piperitæ, racemis paniculisve axillaribus, foliis impari-pinnatis.*

Specific Character and Synonyms.

SCHINUS * *Molle;* foliis impari-pinnatis, foliolis multijugis serratis terminali longissimo, floribus paniculatis.

SCHINUS Molle. *Linn. Sp. Pl. p.* 1467. *Lam. Ill. t.* 822. *Sm. in Rees' Cycl. n.* 1. *De Cand. Prodr. v.* 1. *p.* 74. *Hook. Bot. Misc. v.* 2. *p.* 213. *Spreng. Syst. Veg. v.* 2. *p.* 391.

MOLLE. *Clus. Exot.* 322.

MULLI Clusii, &c. *Feuill. Peruv. v.* 3. *p.* 43.

(β.) integerrima; foliolis integerrimis.

SCHINUS Areira. *Linn. Sp. Pl. p.* 1467. *De Cand. Prodr. v.* 1. *p.* 74.

MULLI foliis non serratis. *Feuill. Peruv. v.* 3. *p.* 43. *t.* 30.

MOLLI arboris adultis ramis. *Clus. Cur. Post.* 50.

This plant, the *Molli* or *Molle* of the Peruvians, grows wild, not in Peru only, but also in Mexico, according to authors, where it inhabits

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* From σχινος, the ancient name of the *Mastick Tree:* and this is known by the same name in Peru.

dry and sandy places: it is likewise found in Chili, unless the specimens I have received from that country are cultivated plants. If not possessed of much beauty in the flowers, (which, however, are rarely produced in our collections,) the *Molle* yields to few trees in the gracefulness of its foliage: added to which, its properties and uses are well deserving of our attention.

The whole plant abounds in a viscid and resinous oil, which yields a powerfully aromatic and pungent odour, and which some have compared to the scent of Fennel. That which naturally exudes from the bark is most viscid, and concretes on exposure to the air, and resembles Mastick; that of the leaves is more fluid; and if these leaves be broken transversely into pieces and thrown on the surface of water, especially if the back of the leaf be applied to the fluid, they move by jerks, generally in circles, in a most remarkable manner. In warm weather, and during a calm state of atmosphere, this movement continues for a considerable length of time, gradually becoming weaker and weaker, till it ceases altogether. This singular property is due to the escape of the oil just mentioned, which escaping suddenly from the wounds in the broken fragments of foliage, propels them in an opposite direction. Some other species of *Molle* (if we may judge from the peculiar odour, for they have not flowered with us,) have been observed by Mr. MURRAY to exhibit this phænomenon in a more remarkable degree, especially a simple-leaved species from Peru, given to us by Mr. CRUCKSHANKS. A white odoriferous substance is also obtained from the foliage, resembling *Gum Elemi*, which, dissolved in milk, is used for diseases in the eye. Of the bark, boiled in water, lotions are made for healing tumours and reducing inflammations. The pulp of the fruit is described as gummy, and of a sweet flavour: the Indians prepare from it an agreeable drink which is very refreshing, by infusing the berries in water and pressing out the juice which communicates a vinous colour. This again is often converted into vinegar.

In Mrs. GRAHAM's "History of Chili," we are told that the heart of the *Molle* tree is very solid, and used for pillars, for the axletrees of waggons, and gables and corner-posts of dwellings. Where a part is buried under ground, it takes root, and thereby secures the building better. This tree yields a gum, which applied to the head as a plaister, relieves spasms; and the thickened fluid that exudes from the wounded bark is excellent for nervous complaints, and affords a good stomachic and cardiac medicine.

This shrub flowered in April of the present year, (1834,) in the greenhouse of WILLIAM CHRISTY, Jun., Esq. of Clapham Road, and our drawing was obligingly made from his specimens by Mr. J. D. C. SOWERBY, who inherits the same talent for the fine arts which so eminently distinguished his father.

DESCR. In our collections this forms a moderately-sized *shrub:* bearing copious evergreen, pinnated leaves, varying exceedingly in the number of leaflets, as well as in their relative length and breadth, the margins serrated, in β entire, the terminal leaflet generally the longest. *Flowers* small, in axillary and terminal panicles; in the present instance bearing stamens and pistil; but the latter are small and probably imperfect. *Calyx* five-cleft. *Petals* five, obovato-lanceolate, spreading, pale yellow-green. *Germen* globose. *Styles* three, each tipped with a large capitate *stigma.*

Fig. 1. Part of a Flower, exhibiting the Calyx, a Petal, the Stamens, and Pistil. 2. Stamen: slightly *magnified.*

W.J.H. del.

Pub by S. Curtis Glazenwood Essex Aug 1 1834

Swan sc.

COLEONEMA PULCHRUM. BEAUTIFUL COLEONEMA.

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—RUTACEÆ.)

Generic Character.

Cal. 5-partitus. *Discus* basi calycis adnatus, margine 5-lobus. *Pet.* 5, limbo patente, ungue lato longitudinaliter canaliculato. *Filamenta* 10, 5 sterilia, petalis opposita, eorumdem basi adnata et canaliculo applicata, breviora, teretia, apice glanduloso-attenuata; 5 alterna disci lobis opposita, unguibus petalorum subæqualia, antherifera, antheris subrotundis, apice glandula sessili minuta instructis. *Stylus* filamentis subæqualis, apice dilatatus in *stigma* capitatum, papillosum, obscure 4-sulcum. *Ovaria* 5 introrsum connata apice in cornu liberum producta, glabra, ovulis superpositis. *Fructus* 5-coccus, coccis apice extrorsum breviter corniculatis, compressis, punctato-rugosis.

Frutices. Folia *sparsa, brevia, linearia, acutissima, glanduloso-punctata.* Flores *albi, in summis ramulis axillares, solitarii, breviter pedunculati, bracteis pluribus adpressis sepaliformibus stipati. Adr. de Juss.*

Specific Name and Character.

COLEONEMA * *pulchrum;* ramis virgatis, foliis filiformibus acuminatis supra planis subtus semiteretibus convexis, floribus (roseis) axillaribus solitariis folio multo brevioribus, bracteis subulatis.

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* From κολεος, a *sheath,* and νημα, a *filament,* from the groove in the claw of the petal in some species, in which the sterile filament is partly lodged.

The present graceful and beautiful plant is no doubt a native of the Cape of Good Hope, and has long been cultivated in the greenhouse of the Botanic Garden of Glasgow, under the name of DIOSMA *angustifolia,* a name, however, only of the gardens and implying a character common to others of the Genus. Our plant unquestionably comes under the Genus COLEONEMA of BARTL. et WENDL. of which only three species are enumerated by ADRIAN DE JUSSIEU: C. *album* (DIOSMA, TH., probably the D. *ericæfolia,* ANDR. Bot. Rep. t. 451. which it cannot be,) and DIOSMA *aspalathoides,* Herb. Burm. and D. *filiformis,* Herb. DE CAND. —of the two latter we know nothing but the names. It flowers in April and May, and deserves a place in every collection from its graceful mode of growth and bright and conspicuous rose-coloured blossoms, which continue long in perfection.

DESCR. Our plant forms an upright shrub, four to six feet high, bearing numerous twiggy, slender, pendent branches, clothed with a yellow brown bark and glandular. *Leaves* an inch and a half long, slender, filiform, tapering to a sharp brown point, the upper side flat, the under semiterete, glandular and marked with two pale lines, the margin very minutely scabrous: towards the extremity of every branch, in the axil of each leaf, is a rather large bright rose-coloured *flower,* on a short *peduncle* which has several subulate imbricated bracteas, the whole much shorter than the leaf. *Calyx* five-partite with a short green tube, and a five-partite limb; *segments* subulato-lanceolate, erect, reddish. *Petals* five, ovate, clawed, inserted at the back of a five-lobed, glandular cup which is adnate with the tube of the calyx, and alternating with these five lobes. *Stamens* five, perfect, free, at the back of the lobes of the cup, as long as the claws of the petals: *filaments* subulate, white. *Anthers* orange, with a short point: *pollen* yellow. Five *sterile filaments* are adnate with the claws of the petals, white. *Germen* with five free, erect lobes. *Style* very short. *Stigma* capitate.

Fig. 1. Flowers. 2. Portion of the Glandular Cup, with two perfect Stamens, a Corolla and the adnate sterile Stamen. 3. Pistil. 4. Upper side of a Leaf. 5. Underside of ditto :—*magnified.*

3341

W. J. H. del.

Pub. by S. Curtis Glazenwood Essex Aug. 1. 1834

Swan Sc.

ACACIA HASTULATA. LITTLE HALBERD-LEAVED ACACIA.

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Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum bivalve. *D C.*

Specific Name and Character.

ACACIA *hastulata;* ramis elongatis dense foliosis hirtis, phyllodiis verticalibus sessilibus deltoideo-hastatis cuspidato-acuminatis pungentibus rigidis, basi hinc uniglandulosis, stipulis setaceis rigidis persistentibus, pedunculis solitariis vix folio longioribus, floribus capitatis quadrifidis.

ACACIA hastulata. *Sm. in Rees' Cycl. Suppl. De Cand. Prodr. v. 2. p.* 449.

Notwithstanding the many species that have been published of the Australian leafless ACACIAS, I believe very many more lie unnoticed in our Herbaria, and numerous others exist in the country to reward the researches of future Naturalists. The present, which may certainly be reckoned among the most singular and distinct, was discovered by Mr. MENZIES, in King George's Sound, and in the same country by the late Mr. FRASER, whence he sent to me native specimens in 1829, and seeds to our Botanic Garden. Plants raised from the latter flowered in the greenhouse in 1834. The blossoms are delightfully fragrant, smelling like Hawthorn.

Descr. A *shrub* of moderate size, with long, twiggy *branches*, obscurely striated, hairy. *Leaves* or *Phyllodia*, numerous, crowded, vertical, sessile, three to four lines long, deltoid, acuminate and pungent, somewhat hastate at the base, and there a little oblique, with an obscure gland in the upper angle, having a strong central rib and a slightly thickened margin, most evident in the dried specimens: the surface glabrous on both sides: colour dark green. *Stipules* setaceous, brown, rigid, persistent. *Peduncles* axillary, solitary, scarcely longer than the leaves, and bearing a globose head of few, but very fragrant lemon-coloured *flowers*. *Calyx* and *corolla* 4-fid. *Stamens* very numerous.

Fig. 1. Portion of a flowering Branch. 2. Single Flower. 3. Leaf and Stipules.—*Magnified.*

3342

Dr C.W. Short del.

Pub by S Curtis Glazenwood Essex Aug 1 1834.

Swan Sc.

SILENE VIRGINICA. VIRGINIAN CATCHFLY.

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Class and Order.

DECANDRIA TRIGYNIA.

(Nat. Ord.—CARYOPHYLLEÆ.)

Generic Character.

Cal. tubulosus quinquedentatus nudus. *Pet.* 5, unguiculata fauce sæpissime coronata, limbo bifido. *Stam.* 10. *Styli* 3. *Capsulæ* basi triloculares, apice in 6 dentes dehiscentes. *D C.*

Specific Character and Synonyms.

SILENE *Virginica;* viscoso-pubescens, caule inferne decumbenti dein erecto ramoso, foliis oblongis spathulatisque acutis infimis longe petiolatis basi longe ciliatis, panicula trichotoma, calycibus amplis cylindraceo-clavatis basi obtusis, petalis longe unguiculatis latis bifidis coronatis (coccineis).

SILENE Virginica. *Linn. Sp. Pl. p.* 600. *Mich. Am. v.* 1. *p.* 272. *Pursh, Fl. Am. v.* 1. *p.* 316. *Elliott, Carol. v.* 1. *p.* 516*?* *Torrey, Fl. of Un. St. v.* 1. *p.* 450. *De Cand. Prodr. v.* 1. *p.* 379. *Spreng. Syst. Veget. v.* 2. *p.* 411. *Hook. Fl. Bor. Am. v.* 1. *p.* 90.

LYCHNIS flore simplici specioso coccineo, &c. *Gronov. Virg. p.* 16.

In the Flora Bor. Americana, above quoted, I expressed a doubt whether the S. *Virginica,* of which I had then only very indifferent specimens at my command, were really different from the S. *Pennsylvanica.* But my valued friend, Dr. SHORT of Lexington, has cleared up all my difficulties on this point, and by a beautiful drawing of the former, (which though said in the Hortus Kewensis to be introduced to our collections by Mr. LODDIGES in 1783, I have never seen in our gardens,) and by excellent specimens of both with remarks upon them, has enabled me to give the accompanying representation and description. "The S. *Pennsylvanica* is always of humble growth, rarely rising more than six or eight inches from the ground, which it covers in dense patches of considerable size, and improves much under cultivation." The flowers too are of a rose colour. "The S. *Virginica* is more solitary in its habit: there are fewer stems arising from one root, and they frequently exceed two feet in height." Mr. ELLIOTT says, that this has sometimes entire petals; but Dr. SHORT has never seen the petals otherwise than bifid: a circumstance, together with the smaller size, narrower leaves, and smaller flowers, by which it may be known from S. *regia* (SIMS, Bot. Mag. t. 1724.).

DESCR. *Stem* a foot and a half to two feet high, nearly glabrous, almost erect and trichotomously panicled above. *Leaves* in remote, opposite pairs, oblong, acute, glabrous, the lower ones broader upwards, and the lowest petiolated; the petiole fringed with long hairs on each side. *Peduncles* mostly bearing three flowers, with small ovate or lanceolate *bracteas* on the pedicels. *Calyx* oblong or cylindraceo-clavate, striated, very obtuse at the base, five-toothed, and as well as the pedicels viscido-pubescent. *Petals* of a fine scarlet, the *limb* spreading, oblong, bifid, with acute segments. *Anthers* and *Styles* exserted.

3343.

W. H. del.

Pub by S. Curtis. Glazenwood Essex Aug. 1 1834.

Swan sc.

(3343)

IRIS TENAX. TOUGH-THREADED IRIS.

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Class and Order.

TRIANDRIA MONOGYNIA.

(Nat. Ord.—IRIDEÆ.)

Generic Character.

Cor. 6-partita: laciniis alternis reflexis. *Stigmata* petaliformia.

Specific Character and Synonyms.

IRIS *tenax*; imberbis, foliis lineari-ensiformibus tenacissimis cauli unifloro subæqualibus, corollæ tubo brevissimo, ovario longipedunculato nudo, petalis exterioribus obovatis acuminatis venosis, stigmatibus bilobis abbreviatis. *Lindl.*

IRIS tenax. *Dougl. Journ. ined. Lindl. Bot. Reg. t.* 1218.

This interesting plant is stated by its discoverer in the work just referred to, to be a common plant in North California, and along the coast of New Georgia, in dry soils or open parts of woods, flowering in April and May, the same season that it does with us when kept in a cool frame. Mr. DOUGLAS gave it the appropriate appellation of *tenax,* because the native tribes about the Anguilac River make a fine cord from the fibres of the leaves, of which they weave their fishing-nets, a purpose to which it is admirably suited on account of its buoyancy, strength, and durability. Snares are made of it for deer and bears, of such strength, that one not thicker than a sixteen-thread line is sufficient to straugle the great stag of California, (CERVUS *Alces,*) one of the most powerful animals of its tribe.

It has been recommended for cultivation by Professor LINDLEY in England, (where it proves perfectly hardy,) as better suited to our climate than the famous *New Zealand Flax.* The Glasgow Garden is indebted to the London

Horticultural Society for the possession of the plant from which our drawing was made.

Descr. *Plant* from ten inches to a foot high. *Leaves* distichous, linear-ensiform, scarcely so tall as the stem, striated, upper ones convolute, short, forming an imperfect spatha. *Flower* solitary, handsome. *Perianth* nearly sessile on the elongated, obtusely trigonal *germen,* its ground colour a reddish-purple, with deeper veins; *outer segments* broadly obovate, unguiculate, with an acute point, having in the middle a broad white spot, variegated with yellow, and marked with deep purple veins, around this the purple is of a deeper and brighter hue than on the rest of the segments: *inner segments* erecto-connivent, broadly-spathulate, acute, waved, concave, almost as long as the outer ones. *Styles* oblong, linear, purple, carinate on the back, and covering the stamen, appressed to the claw of the outer segment of the perianth; *Stigma* bifid.

Fig. 1. Outer Segment of the Perianth: slightly *magnified.*

3344

W.J.H. del.

Pub by S. Curtis Glazenwood Essex Aug 1 1834.

Swan sc.

ALSTRŒMERIA OCULATA. EYE-MARKED ALSTRŒMERIA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Perianthium corollaceum, subcampanulaceum, 6-partitum, irregulare, laciniis duabus (vel tribus) interioribus basi tubuloso-conniventibus. *Stam.* 6, laciniis inserta, demum declinata. *Stigma* trifidum. *Capsula* trilocularis, loculis polyspermis.—Caulis *erectus, scandens aut volubilis, foliatus.* Flores *umbellati. Kunth.*

Specific Character and Synonyms.

ALSTRŒMERIA *oculata;* caule terete glabro volubili, foliis ovato-oblongis obtusis utrinque glabris, petiolis tortis, umbellis multifloris, pedunculis subbifloris pedicellisque glabris, bracteis bracteolisque obovato-spathulatis crispatis, petalis difformibus longitudine subæqualibus. *Graham.*

ALSTRŒMERIA oculata. *Lodd. Bot. Cab. t.* 1851. *Graham, in Ed. Phil. Journ.* 1834. *Cuming, Herb. Chil. n.* 345.

Various species of this elegant and beautiful Genus abound in South America, especially on the side next the Pacific. Forty-nine kinds are enumerated in SCHULTES' Systema Vegetabilium. Several new ones exist in our Herbarium, and others are to be met with in the stoves and greenhouses of this country. The present species can boast of flowers, which though perhaps the smallest of the Genus, are among the most desirable for gracefulness and beauty, and remarkable for the eye-like spots in the centre

of each inner petal. It appears to have been first discovered at Valparaiso by Mr. CUMING, with whose collections it has been distributed, marked, No. 345, in 1830, "These specimens," Dr. GRAHAM observes, "differ from the cultivated plant only in being more drawn out, in the peduncles being occasionally three-flowered, in the leaves being more elliptical, less glaucous, and free from undulation in the edges, but in every essential particular the two appear to be the same." Our drawing was made by Mr. M'NAB at the Edinburgh Botanic Garden, in April, from a plant sent to Dr. GRAHAM by Mr. KNIGHT.

DESCR. *Stems* numerous, flexuose and voluble, green, glabrous and shining, simple. *Leaves* ovato-oblong, many nerved, crisped at the edge, in my cultivated specimens glabrous on both sides, bright green above, glaucous below, petioled; *petioles* twisted, illustrating that beautiful arrangement of nature to correct that lusus, so common in this Genus, by which the upper and lower surfaces of the leaf are originally reversed. *Umbel* terminal, several rayed, the rays generally bifid and supporting two flowers. *Bracteæ* and *bracteolæ* corresponding in number to the primary and secondary divisions of the umbel, obovato-spathulate, crisped, and generally coloured in the edges. *Corolla* (nine lines long, seven and a half across) campanulate, red; *petals* subequal in length, the outermost the broadest, nerved, ovate, so narrow as to resemble a claw nearly in their lower half, notched at the apex, somewhat revolute in their edges; inner ones sandglass-shaped, pubescent on the inside in their lowest half, connivent in the middle, so as to close the throat, which is whitish and surrounded by a broad, dark purple semilunar band, especially on the two uppermost (which are the broadest) of the three inner petals. *Stamens* shorter than the corolla, decumbent; *filaments* glabrous at their origin and near the apex, pubescent and slightly swollen in the centre, immediately above which they are sprinkled with small lilac tubercles; *anthers* ascending, reddish-leaden-coloured, oblong, flat, bursting in the edges, when, as in the Genus, they become flattened in the opposite direction; *pollen granules* minute, greenish-leaden-coloured. *Pistil* about as long as the stamens; *Stigma* trifid; *Style* glabrous, with some small scattered lilac tubercles in its upper part; *germen* dark green, turbinate, triquetrous, angles rounded. *Graham.*

Fig. 1. Stamen. 2. Inner, 3, Outer Petal:—*magnified.*

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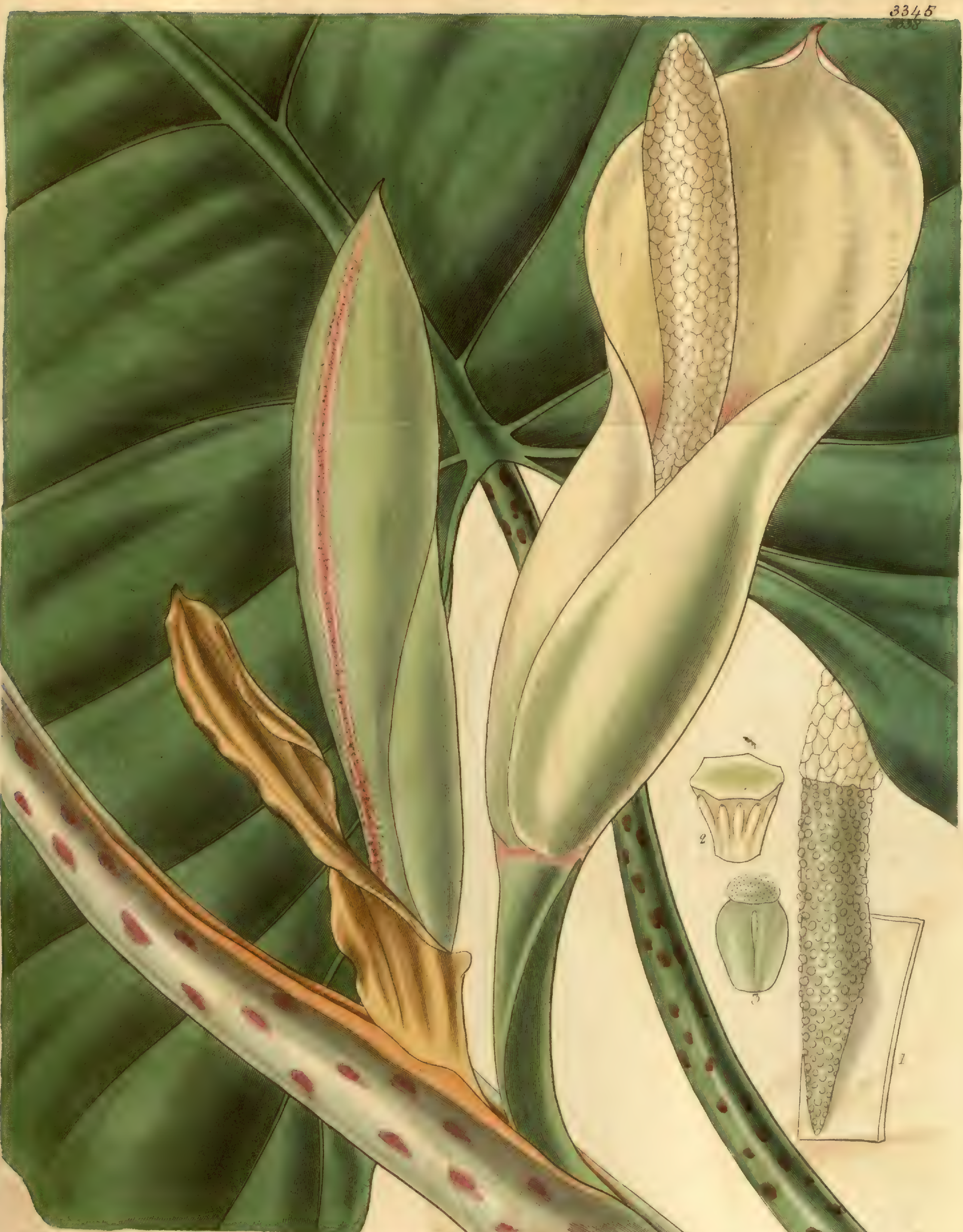

W.J.H. delt

Pub by S. Curtis Glazenwood Essex Aug 1 1834

Swan Sc.

CALADIUM GRANDIFOLIUM. LARGE-LEAVED CALADIUM, OR INDIAN KALE.

****

Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—AROIDEÆ.)

Generic Character.

Spatha monophylla, cucullata, basi convoluta. *Spadix* ad apicem staminifer, mucrone quandoque nudo, medio glandulosus, basi germinibus tectus. *Antheræ* peltatæ, sub pelta ad ambitum multiloculares. *Glandulæ (stamina sterilia)* obtusæ. *Stigma* umbilicatum. *Bacca* monosperma. *Br.*

Specific Character and Synonyms.

CALADIUM *grandifolium;* caulescens radicans, foliis opacis cordato-sagittatis acutis petiolis teretibus, spadice obtuso spatham superne cucullatam medio subconstrictam basi attenuatam æquante. — *Bot. Mag. t. 3345.*

CALADIUM grandifolium. *Willd. Sp. Pl. v.* 4. *p.* 490. *Spreng. Syst. Veget. v.* 3. *p.* 770.

ARUM grandifolium. *Jacq. Hort. Schœnbr. v.* 2. *t.* 189. *p.* 32.

When I published the CALADIUM *fragrantissimum* at t. 3314 of this Magazine, I expressed myself as of opinion that the CALADIUM *grandifolium* of SIMS (Bot. Mag. t. 2643,) should be considered a variety of the original plant, of the same name, of JACQ. Hort. Schœnbr. t. 189. I had not then seen a recent flowering specimen of the true *grandifolium.* Now that I have done so, I cannot but come to the conclusion, that Dr. SIMS's plant is quite another species, with leaves glossy on the upper surface, and having a broad, semicircular sinus at the base, with differently-shaped lobes, and a spatha almost exactly resembling both in form and colour that of our CALADIUM *fragrantissimum* being red, and remarkably inflated below *, and not pale green and attenuated at the base.

The plant from which our present drawing was made in April, 1834, at the Glasgow Botanic Garden, came from Demerara. It makes a truly handsome appearance, with its climbing and rooting stems, its large foliage, and pale spathas with a dark red line down the middle on the back.

DESCR. *Stem* scandent, terete, dingy green, spotted with purple, rooting, when cut across exhibiting a copious fluid which dries and forms a kind of varnish. *Leaves* two feet or more long, cordato-sagittate, opaque above, *petiole* rounded, spotted with purple. *Flowers* bursting two or three together from a fissure at the base of the petiole, scentless, accompanied by a marcescent, large *bractea. Spatha* at first pale green, afterwards pale buff, green at the base on the outside, pinkish within, marked at the back with a purple hue. It is cucullate at the extremity, slightly contracted in the middle, tapering at the base downwards into a short, somewhat trigonal *peduncle*. *Spadix* obliquely inserted (or decurrent) as long as the spatha, slightly club-shaped, below clothed with numerous green pistils, above with dense, white stamens.

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* The species may be thus distinguished:

C. *Simsii;* caulescens radicans, foliis lucidis cordato-sagittatis acutis petiolis teretibus, spadice obtuso spatham cucullato-cylindraceam medio constrictam basi ventricosam subæquante.

CALADIUM grandifolium. *Sims in Bot. Mag. t.* 2643. (non *Jacq.*)

Fig. 1. Portion of the Spatha, to which the Spadix is affixed, scarcely *magnified.* 2. Stamen. 3. Pistil: *magnified.*

W. J. H. del.

Pub by S. Curtis Glazenwood Essex Sep 1 1834.

Swan Sc.

ACACIA LINEATA. NARROW LINED-LEAVED ACACIA.

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Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord. LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia, 10—200. *Legumen* continuum exsuccum bivalve. *D C.*

Specific Character and Synonym.

ACACIA *lineata;* villoso-hirsuta, phyllodiis linearibus strictis (subuncialibus) uninerviis apice obliquis subuncinatis mucrone calloso terminatis, nervo lineæformi, margini superiori parallelè approximato, capitulis axillaribus solitariis geminisve, pedunculis filiformibus phyllodio longioribus, floribus quinquefidis. *A. Cunn.*

ACACIA lineata. *A. Cunn. in Don's Syst. of Gard. v.* 2. *p.* 403. *n.* 28.

A shrub of bushy growth, frequent in the interior of New South Wales, in barren forest-grounds lying West from Wellington Valley, in long. 148° E.; as also in the country on the North from the settlement of Bathurst, where it flowers throughout the winter months (May—July), and ripens its legumes in December. It was originally discovered, during the progress of the expedition on the Lachlan River in 1817, and was two years' since, communicated by Mr. AITON, from the Royal Gardens at Kew, where it flowers with many of its kindred, in the months of April and May. *All. Cunn.*

Descr. An upright growing *shrub,* bearing copious, erecto-patent *leaves,* which are pubescenti-hirsute, less than an inch long, slightly curved, attenuated at the base, with an acute curved point at the extremity, and having a single nerve running near to and parallel with the upper margin. *Bracteas* small, acute, brown, one on each side the leaf. *Peduncles* one or two from the same axil, very slender, filiform, longer than the leaves, bearing a globose head of deep yellow, fragrant *flowers,* and sometimes a solitary flower below the capitulum. *Calyx* and corolla 5-fid: *Stamens* numerous.

Fig. 1. Leaf and Peduncle with a Head of Flowers. 2. Single Flower. 3. Leaf. :—*magnified.*

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W. J. H. del.

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Swan Sc.

CAMPANULA MACRANTHA, β. polyantha. LARGE-FLOWERED GIANT BELL-FLOWER; many-blossomed *var.*

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CAMPANULACEÆ.)

Generic Character.

Cor. campanulata, fundo clauso valvis staminiferis. *Stigma* 3-fidum. *Caps.* infera, poris lateralibus dehiscens.

Specific Character and Synonyms.

CAMPANULA *macrantha;* caule erecto simplici lævi, foliis duplicato-serratis radicalibus lato-cordatis petiolatis caulinis ovatis sessilibus, pedunculis erecto-curvatis demum cernuis, calycis basi obtusi laciniis lanceolato-acuminatis corolla longe campanulata maxima triplo brevioribus.
CAMPANULA macrantha. *Fischer MSS.*
CAMPANULA latifolia, macrantha. *Sims Bot. Mag. t.* 2553. *Alph. De Cand. Monogr. Camp. p.* 265.
CAMPANULA Iberica maxima subhirsuta, flore maximo cæruleo. *Tourn. Herb. Cor.* 4. (fide *Alph. De Candolle.*)
β. *polyantha;* caule altiori, floribus numerosis. *Tab. nostr.* 3347.

I am aware that ALPHONSE DE CANDOLLE in his valuable work on the CAMPANULACEÆ, as well as Dr. SIMS, and lately even Dr. FISCHER himself, are of opinion, that the present *Bell-flower* is only to be considered a variety of the C. *latifolia;* but on a careful comparison of the two, growing side by side in the Glasgow Botanic Garden, I cannot but look upon them as really distinct. Besides the much larger and deeper colour of the flowers, the calyx is far more obtuse at the base, the leaves are much broader and coarser, and of a darker colour, and the whole plant is stouter and stronger. That which I here consider the var. β was received from Mr. FISCHER of the Gottingen Botanic Garden, and is certainly the handsomest of all the CAMPANULAS, and the most worthy of a place in every collection, and in the borders of every shrubbery. It was received with the name of " C. *mucronata*;" but as there is nothing mucronate about the plant, I am disposed to think that the word "*macrantha*" was intended to have been written. It is a still taller plant than the C. *latifolia* γ, *macrantha*, figured at t. 2553 of this work; the flowers are larger, of a bluer colour, and much more numerous upon the stem.

3348

W.J.H. delt. Pub by S Curtis Glazenwood Essex Sept 1 1834. Swan Sc.

INDIGOFERA VIOLACEA. PURPLE INDIGO PLANT.

* * *

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. 5-fidus lobis acutis. *Vexillum* rotundatum emarginatum. *Carina* utrinque calcare subulato notata demum sæpe elastice deflexa. *Stamina* diadelpha. *Stylus* filiformis glaber. *Legumen* teretiusculum aut planum aut tetragonum polyspermum bivalve, rarius oligospermum ovatum imo monospermum subglobosum. *Semina* ovata utrinque truncata isthmis cellulosis sæpe disjuncta.—Herbæ *aut* suffrutices. Stipulæ *a petiolo distinctæ parvæ.* Pedunculi *axillares.* Flores *racemosi purpurei cærulei aut albi.* Folia *nunc simplicia impari-pinnata aut dilatata, foliolis sæpe basi stipellatis.* Pili *nunc omnino nunc plerique strigosi centro adfixi adpressi. D C.*

Specific Character and Synonyms.

INDIGOFERA *violacea ;* fruticosa, foliolis 6-jugis oblongis, racemis axillaribus folio dimidio brevioribus, leguminibus strictis subcylindraceis glabris 6—10-spermis. *Roxb.*

INDIGOFERA violacea. *Roxb. Fl. Indica.* 3. 380. *Graham in Ed. N. Phil. Journ.* 1834.

This very handsome shrub has stood for several years in the open air in the Botanic Garden, Edinburgh, and flowered for the first time in July, 1834. We received it from Mr. THOMAS HOGG, of Clapton, in 1820, marked with a query as a species of INDIGOFERA. It differs from ROXBURGH's description of I. *violacea,* in having the raceme rather longer than the leaf. I should have considered it his I. *arborea,* had it not been that the branches are erect, not " spreading

in every direction," and had it not been reasonable to expect that I. *arborea* would have attained a larger size in a shorter time. There is a very near affinity between INDIGOFERA *cassioides*, ROTTL., I. *violacea*, ROXB., I. *arborea*, ROXB., I. *Jirahulia*, HAMILTON, and the specimens which I named I. *verrucosa*, in WALLICH's List of Plants in the East India Company's Museum. If they shall prove to be specifically the same, the name of I. *cassioides* ought to be adopted, as published by DE CANDOLLE, in his Prodromus, in 1825. I have no specimen of I. *violacea* from the Botanic Garden, Calcutta, with which to compare our plant, and the specimens of I. *arborea* from thence have their branches much diffused.

DESCR. *Shrub* (with us five feet high) erect; *branches* sub-erect, round, pubescent when young, bark brown, with straight, slightly prominent, continuous, longitudinal lines, slightly warted on the older branches. *Leaves* (two inches and a half long) pinnated; *leaflets* in five pairs, obovato-elliptical, flat, slightly pubescent on both sides, the hairs, as most commonly in the Genus, fixed by the middle, and adpressed, rufous upon the young leaves, and on the extremities of the twigs. *Stipules* and *stipellules* bristle-like, hairy, marcescent, the former spreading, the latter erect. *Racemes* axillary, longer than the leaves; *flowers* twelve to twenty, continued nearly to the bottom of the pubescent peduncle; *pedicels* rarely twice as long as the concave, subulate, deciduous *bracteæ*, from the axils of which they spring. *Calyx* rather shorter than the pedicel, pubescent, rotate, five-toothed, the lowest tooth the longest, the two upper distant. *Corolla* large and handsome, nectariferous at the base; *vexillum* erect, elliptical, concave, with a white slightly striated spot on the inside, near its base, above which it is reddish-purple, passing into lilac, and becoming gradually paler upwards; nearly sessile, and somewhat callous at its insertion into the calyx. *Alæ* scarcely shorter than the vexillum, of a bright and deep rose-colour, spread out horizontally in the centre of the flower, the upper (inner) edges being straight and in contact, the lower (outer) edges hatchet-shaped, attenuated downwards, swollen at the base, and there slightly hairy and gibbous on the outer and upper sides, its short tooth-like claw being projected from the lower edge; *keel* rather longer than the alæ; rose-coloured in its edges, every where else pale lilac; its petals united, except at the claws, which are callous; at first straight, and afterwards bent down elastically, separating very widely the keel and alæ from the vexillum, somewhat hairy towards its edge and back, toothed on the upper edge of its claws, and having a distinct papilla on each side. *Stamens* diadelphous, included within the keel. *Filaments* purple, glabrous, a very short ascending portion only being free; *anthers* green, mucronate; *pollen granules* extremely minute. *Pistil* little longer than the stamens; *stigma* minute; *style* slightly pubescent; *germen* linear, glabrous. *Ovules* about ten. *Graham.*

Fig. 1. Flower. 2. Calyx and Pistil. 3. Carina. 4. Anthers and portion of the Filament:—*magnified.*

3349

W.J.H. del.

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Swan Sc.

GARDENIA FLORIDA, fl. *simplici.* SINGLE-FLOWERED CAPE JASMINE.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—RUBIACEÆ.)

Generic Character.

Calycis tubus ovatus sæpe costatus; *limbus* tubulosus truncatus dentatus fissus partitusve. *Cor.* infundibuliformis aut hypocraterimorpha, tubo calyce multo longiore, limbo per æstivationem contorto patente 5—9-partito. *Antheræ* 5—9 lineares ad faucem subsessiles. *Stigma* clavatum bifidum aut bidentatum, lobis crassis erectis. *Ovarium* dissepimentis incompletis 2—5 semi-divisum, 1-loculare. *Bacca* carnosa calyce coronata intus chartacea aut nucleata incomplete 2—5-locularis. *Semina* minuta placentis parietalibus carnosis immersa. *Embryo* albuminosus vagus.—Arbores *aut* Frutices, *inermes aut spinescentes.* Folia *opposita raro verticillata, ovalia.* Flores *axillares aut terminales, plerumque solitarii albi, demum sæpe flavescentes, sæpius odori. D C.*

Specific Character and Synonyms.

GARDENIA[*] *florida;* inermis, fruticosa, erecta, foliis ellipticis utrinque acutis, floribus solitariis subterminalibus sessilibus hypocrateriformibus, calycis laciniis verticalibus lanceolato-subulatis tubum corollæ æquantibus, baccis elongato-turbinatis costatis. *D C.*

GARDENIA florida. *Linn. Sp. Pl. p.* 305. *Ker, in Bot. Reg. t.* 449. *De Cand. Prodr. v.* 4. *p.* 379. *Spreng. Syst. Veget. v.* 1. *p.* 765. *Roxb. Fl. Ind. v.* 2. *p.* 550.

GARDENIA

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[*] In honour of Dr. ALEXANDER GARDEN, Botanist and Zoologist; a native of Scotland, but who settled as a Physician, at Charleston, South Carolina.

Gardenia jasminoides. *Sol. in Phil. Trans. v.* 52. *p.* 654. *t.* 20.

(β.) flore pleno. *Ker, l. c.* G. jasminoides. *Ellis, Phil. Trans. v.* 51. *p.* 935. *t.* 23.

Catsjopiri. *Rumph. Herb. Amb. v.* 7. *p.* 26. *t.* 14. *f.* 2.

This delightfully fragrant shrub flowered in June of the present year, in the noble gardens of Wentworth, where it was received from the East Indies, and is treated as a stove-plant; and was obligingly communicated by Mr. Cooper, with the remark that it is probably different from the single-flowered state of Gardenia *florida.* In this doubt I partake myself, for it differs from the only figure I am acquainted with, taken from the recent plant, namely, that of Mr. Ker, in the Botanical Register, t. 449, —chiefly, however, in the greater length of the tube of the corolla, and in the leaves being much more crowded towards the extremities of the branches. Still I dare not venture to make it a new species, without an examination of the fruit, but prefer considering it a long-flowered *var.* of the G. *florida.*

Descr. A *shrub,* with numerous stout woody branches, which bear crowded foliage towards their extremities. *Leaves* oval or obovate, acute, subcoriaceous, opposite, often appearing verticillate. *Bracteas* acute, membranaceous, deciduous. *Flowers* large, solitary, very fragrant. *Cal. segments* erect, narrow, almost linear, much shorter than the tube of the corolla. *Corolla* pure white, somewhat leathery, soon turning yellowish, hypocrateriform; *Tube* long, straight; *Limb* spreading, of six oblong, wavy, obtuse segments. *Anthers* nearly sessile, linear, situated at the mouth of the corolla. *Germen* inferior, scarcely ribbed. *Style* as long as the tube of the corolla. *Stigma* thick, bifid, exserted.

3350

Mr Jas Mc Nab delt

Pub by S.Curtis Glazenwood Essex Sept 1 1834 Swan Sc

ALSTRŒMERIA AUREA. GOLDEN-FLOWERED ALSTRŒMERIA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Perianthium corollaceum, subcampanulaceum, sexpartitum, irregulare; laciniis duabus (v. tribus) interioribus tubuloso-conniventibus. *Stam.* 6, laciniis inserta, demum declinata. *Stigma* trifidum. *Capsula* trilocularis; loculis polyspermis. *Caulis* erectus, scandens aut volubilis, foliatus. *Flores* umbellati. *Kunth.*

Specific Character and Synonym.

ALSTRŒMERIA *aurea;* caule stricto glabro, foliis lineari-ellipticis sparsis glabris pallidis margine scabriusculis supra nervosis glaucis, pedunculis umbellatis bifloris erectis, foliis superioribus duplo brevioribus, corollæ laciniis patentibus subæqualibus mucronatis exterioribus obovatis serratis concoloribus interioribus lanceolatis integerrimis striatis. *Graham.*

ALSTRŒMERIA aurea. *Grah. in Edinb. Phil. Journ., June,* 1833.

This species, imported by Mr. ANDERSON, from Chiloe, was received at the Botanic Garden at Edinburgh from Mr. Low*, of Clapton, under the specific name here adopted, and is now in flower in the greenhouse. I am afraid that in this, as in many other South American genera, we are unwarrantably multiplying specific names; but this is probably rightly considered distinct from any of the plants previously described. In habit it approaches nearly to ALSTRŒMERIA *pulchella*, but probably will always be a much smaller plant. *Graham.*

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* Mr. Low has most obligingly also communicated an excellent drawing, which would have been engraved, had we not already possessed the figure here given. *W. J. H.*

DESCR. *Stems* (a foot and a half high, exclusive of the terminal umbel) numerous, erect, simple, glabrous. *Leaves* (four inches and a half long, three-fourths of an inch broad) very numerous, linear-elliptical, scattered, glabrous, light green, glaucous, and many-nerved on the upper surface, which, by the twisting of the long attenuated base, becomes the lower, slightly rough on the edges, callous at the apex, as is best seen in dry native specimens. *Peduncles* umbellate, erect, about half the length of the leaves, which surround their base like an involucre, two-flowered, the lateral flower springing from the axil of a leaf-like bractea, bearing another similar but smaller bractea on its side, and in general below its middle; and here probably in a very luxuriant state of the plant another flower would arise. *Corolla* orange-coloured, segments nearly equal in length, spreading, mucronate, the three outer segments obovate, serrated, the three inner lanceolate, the lower as well as the three outer segments of nearly uniform colour, and occasionally with one or two deep orange-coloured streaks, the two others more yellow below the apex, and having many such streaks down even to their channelled nectariferous bases. *Stamens* declined, rather longer than the lowest segment of the corolla, orange-coloured; *pollen granules* small, oblong, yellow. *Stigma* trifid, with short pubescence on the surface. *Style* ascending, angular, of uniform orange-colour. *Germen* green, ribbed. *Graham.*

3351

W. J. H. delt

Pub by S Curtis Glazenwood Essex Sepr 1 1834

Swan Sc

MORINDA JASMINOIDES. JASMINE-LIKE MORINDA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—RUBIACEÆ.)

Generic Character.

Calycis tubus obovatus sæpiùs cum vicinis floribus concretus; *limbus* brevis vix dentatus. *Corolla* infundibuliformis, tubo subtereti, limbo patente 5-lobo rariùs 4-lobo. *Stam.* 5, rariùs 4; *filam.* brevibus, *antheris* inclusis (aut exsertis). *Stylus* filiformis, sæpè exsertus. *Stigma* bifidum. *Baccæ* 2—4-pyrenæ, loculis 1-spermis, cum vicinis sæpissimè concretæ et mutuâ pressione compressæ aut angulatæ, calycis vestigio areolatæ. *Embryo* teres in albumine carnoso. *D C.*

Specific Name and Character.

MORINDA* *jasminoides;* ramis tetragonis sterilibus volubilibus, foliis lanceolatis supra nitidis, sæpè in axillis nervorum foveolato-bullatis, stipulis membranaceis acutis basi connatis, capitulis pedunculatis 2—5-floris. *A. Cunn.*

MORINDA jasminoides. *All. Cunn. MSS.*

A volubilous suffruticose plant, rare in shaded brushes of the Colony of Port Jackson, where it was detected by Mr. ALLAN CUNNINGHAM, bearing its orange-coloured berries in the month of March, 1821, by whom it was introduced to Kew, from which collection we have been favoured with specimens, that flowered in April, 1833. In habit it resembles a JASMINUM: and as a species, it approaches very near to M. *parvifolia, D C.*, a native of the Island of Luconia, one of the Philippines.

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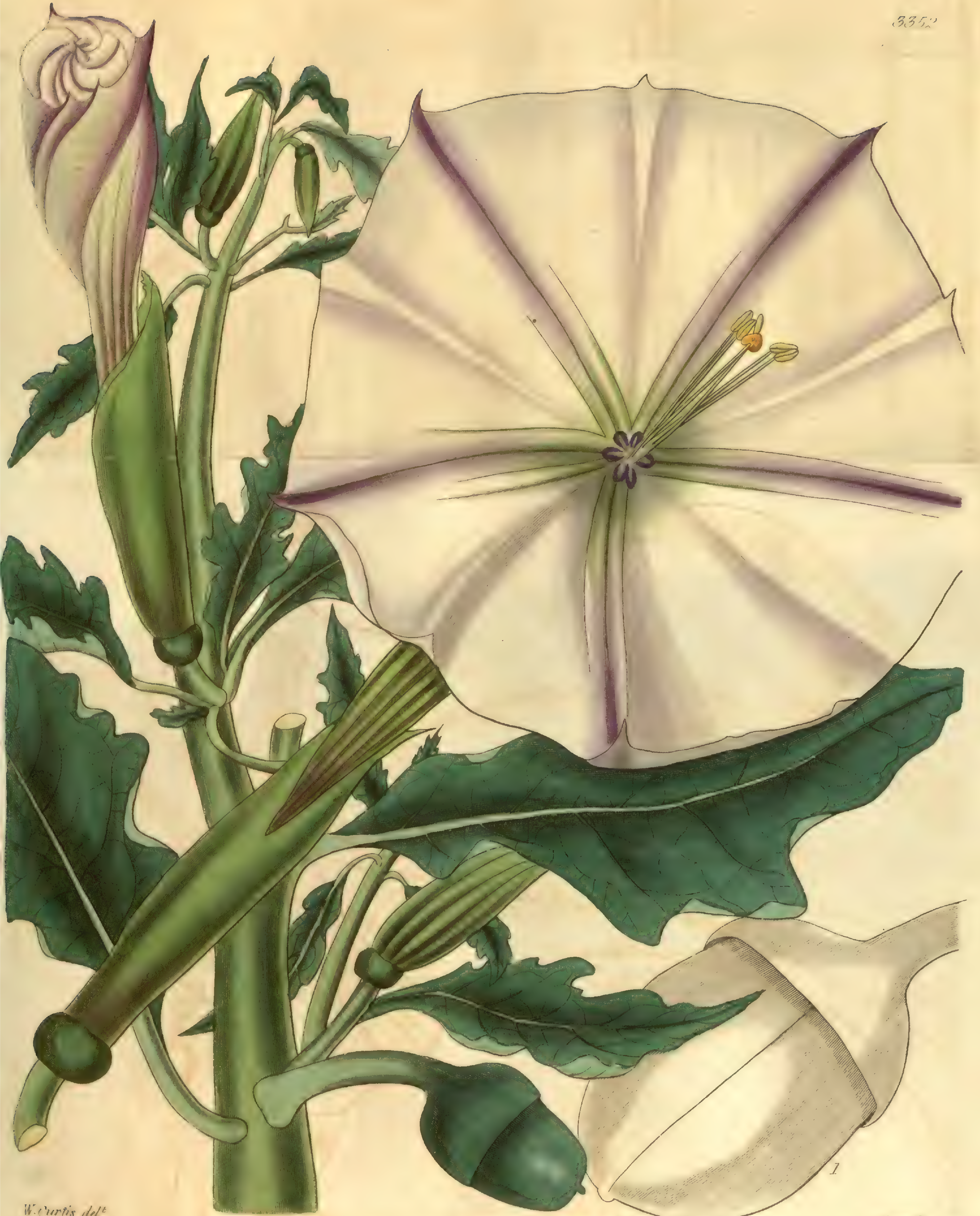
* Quasi MORUS *Indica,* in allusion to its eastern origin, and to the resemblance of the fruit to that of the *Morus* or *Mulberry.*

DESCR. In the cultivated state, Mr. CUNNINGHAM observes that this is a very variable plant. In some situations, in the houses at Kew, it forms a dense *bush,* in others a volubilously-branched *shrub,* with lanceolate or elliptico-lanceolate *leaves,* entire, shortly acuminated, sometimes undulated, with or without foveolated blotches in the axils of the nerves: when present, they are sometimes two, opposite each other, or three, four, or five scattered. *Stipules* membranaceous, brown, acute. *Peduncles* axillary, forked, bearing two leaves, and two capitula, each of from two to five flowers. *Germens* combined into one body. *Limb* of the *calyx* scarcely any. *Corolla* pale buff-coloured; *Tube* narrow, limb of three, four, or five segments, reflexed. *Stam.* three, four, or five; *Filaments* short. *Anthers* ovate, deep yellow. *Stigmas* two, long, linear, acute.

Fig. 1. Head of Flowers. 2. Corolla in bud. 3. Stamen. 4. Stigmas. 5. Young Fruit:—*magnified.*



W. Curtis del^t

Pub by S. Curtis Glazenwood Essex, Sep^r 1 1834.

Swan Sc

DATURA CERATOCAULA. HORN-STEMMED STRAMONIUM.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—SOLANEÆ.)

Generic Character.

Calyx tubulosus, ventricosus, basi peltata persistente. *Cor.* infundibuliformis, plicata, limbo dentato. *Stigma* 2-lobum. *Capsula* semi- 4-locularis, 4-valvis, placentis discretis. *Spreng.*

Specific Character and Synonyms.

DATURA * *ceratocaula;* corolla decemdentata, foliis ovato-oblongis eroso-sinuatis subtus glaucescentibus tomentosis, fructibus pendulis inermibus, caule herbaceo dichotomo.

DATURA ceratocaula. *Ortega, Decad.* 1. *p.* 11. *Jacq. Hort. Schoenbr. v.* 3. *p.* 48. *t.* 339. *Lindl. Bot. Reg. t.* 1031. *Spreng. Syst. Veget. v.* 1. *p.* 103.

DATURA macrocaulis. *Roth, N. Beytr. p.* 159.

This fine annual is a native of Cuba, whence it was introduced to our gardens through the medium of Spain, and blossoms in the open air during the months of July and August. The plants are best raised in a frame, transplanted into the open border in the spring months, and if into a poor soil, they will have less of the rank and weedy character, which all the annual species of this Genus exhibit. The present figure was made by Mr. WILLIAM

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* From the Arabic word *Tátórah* (Forskael.) In some parts of the East Indies it is called *Dáturo.*

Curtis, from a plant that flowered in the extensive nursery at Glazenwood.

Descr. *Stems* erect, with many stout, erect or spreading *branches*, which often present a twisted, and (tapering as they do towards the extremity) a horn-like appearance. *Leaves* alternate, petiolate, ovate or almost lanceolate, unequal at the base, sinuato-pinnatifid, waved, acute, veiny, glabrous and green above, whitish and downy beneath. *Peduncles* axillary, solitary, single-flowered, erect in flower, afterwards drooping. *Calyx* tubular, cleft on one side at the extremity, large, green, slightly tinged with purple. *Corolla* very large : *tube* long, angled, purplish-green : *limb* broad, spreading, plaited, with five large and five smaller teeth, white, tinged with purple, greenish at the base. *Stamens* and *style* exserted. *Capsule* large, drooping, subglobose.

Fig. 1. Capsule :—*nat. size.*

3353

Walt. Fitch del.

Pub. by S. Curtis, Glazenwood, Essex, Octr. 1 1834.

Swan sc.

MIMULUS ROSEUS. ROSE-COLOURED MONKEY-FLOWER.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Cal. prismaticus 5-dentatus. *Cor.* subcampanulata, limbo $\frac{2}{3}$, lobis subæqualibus. *Stigma* bilamellatum. *Dissepimenta* lateribus placentiferis. *Spr.*

Specific Character and Synonyms.

MIMULUS *roseus;* erectus pubescenti-viscidus, foliis ovato-acuminatis 5-nerviis sessilibus inferioribus precipue dentatis, calycis dentibus subæqualibus, corollæ laciniis lato-oblongis obtusis subæqualibus.

MIMULUS roseus. *Lindl. Bot. Reg. t.* 1591. *Lodd. Bot. Cab. t.* 1976.

Hitherto all the known species of MIMULUS have been found bearing flowers of a more or less deep yellow tinge. We are indebted to Mr. DOUGLAS for this very beautiful species with flowers of a fine rose-colour, in size fully equal to those of M. *luteus,* and clothed with a viscid down which yields as powerful a smell of musk, especially towards evening, as the well-known MIMULUS *moschatus* discovered by the same indefatigable traveller. It inhabits northern California, and flourishes in the open border of our gardens during summer, as well as any other species even in as northern a latitude as that of Glasgow. Our Botanic Garden owes the possession of it to the Horticultural Society, which has been the means of adding so many truly ornamental plants to our collections from the North-West coast of America. It flowers in July and August, and bids fair to ripen its seeds with us, by which, or by cuttings, it may be readily increased.

DESCR. Whole plant pubescent and viscid. *Stem* and *branches* rounded, green. *Leaves* an inch to an inch and a half long, ovato-acuminate, rarely approaching to oblong, with five to seven nerves, the lower ones dentate: all of them sessile, paler beneath. *Calyx* often tinged with brown, the teeth nearly equal, the angles much less acute than in M. *luteus*. *Corolla* beautiful rose-colour: *tube* longer than the calyx, pale beneath; *segments* of the *limb* broadly oblong, obtuse or retuse, nearly equal, the base deeper red, forming a sort of ring around the mouth, except on the lower side, where are two elevated, longitudinal, yellow, hairy lines. *Stamens* and *Style* as in M. *luteus*, and shorter than the tube of the corolla.

3354

W. J. H. delt

Pub by S Curtis Glazenwood Essex Octr 1 1834

Swan Sc.

SILPHIUM PERFOLIATUM. PERFOLIATED SILPHIUM.

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Class and Order.

SYNGENESIA POLYGAMIA NECESSARIA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum paleaceum. *Pappus* marginato-bicornis. *Cal.* squamosus.

Specific Character and Synonyms.

SILPHIUM * *perfoliatum ;* foliis oppositis deltoideis petiolatis perfoliatis, caule tetragono lævi, achenio breviter bidentato.

SILPHIUM perfoliatum. *Linn. Sp. Pl. p.* 1301. *Willd. Sp. Pl. v.* 3. *p.* 2331. *Pursh, Fl. Am. v.* 2. *p.* 377. *Elliott, Carol. v.* 2. *p.* 464. *Spreng. Syst. Veget. v.* 3. *p.* 630.

The Genus SILPHIUM contains fourteen or fifteen species, mostly of a stately character, all inhabitants of North America and in general confined to the Southern States. Very few of them are yet figured, and the greater part of them are scarcely known to the European Botanists, save through the short and imperfect descriptions of WILLDENOW and PURSH. The present is indeed a Linnæan plant, and together with the S. *connatum* and S. *laciniatum* may be reckoned among the tallest of the COMPOSITÆ which inhabit the Prairies of the Southern United States. They are however, perfectly hardy in our climate, even in Scotland, flowering during the months of July and August. S. *perfoliatum* extends from Pennsylvania to Carolina. The roots from which our plants were raised were sent from Georgia by Dr. Wray.

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* From *Silphi,* or *Serphi,* a name said to be given to a plant in Africa which yielded the *Laser* of the Romans, a kind of gum, but which seems to have no connection with the present Genus.

Descr. *Root* perennial. *Stem* herbaceous, six to eight feet high, branched, glabrous, four-angled, angles obtuse. *Leaves* ample, rough, deltoid, sinuato-dentate, petiolate, opposite, the petioles connate, upper leaves broadly ovate, scarcely toothed, sessile and connate, concave. *Peduncles* rounded, glabrous, generally in threes from the ultimate pair of leaflets, of which the middle one is single-flowered and naked, the lateral ones two or three-flowered, with a pair of small connate leaves. *Flowers* very large, yellow. *Involucre* leafly, the scales or leaflets squarrose, gradually smaller within, and insensibly becoming narrow, linear, chaffy scales to the florets. *Florets of the ray* about twenty-five to twenty-eight, fertile, in four rows. *Achenia* compressed and winged, the innermost ones *not* bidentate: outer broader and with two short teeth. *Florets of the centre* with a long, cylindrical, abortive *germen*. *Anther* dark brown. *Stigma* yellow, linear-filiform, glandular.

Fig. 1. Inner Floret of the Ray. 2. Achenium of an outer Floret. 3. Ditto of the Disk: *magnified.*

3355

W.J.H. del.
Pub by S. Curtis Glazenwood Essex Oct 1 1834.
Swan Sc.

SILPHIUM TRIFOLIATUM. WHORL-LEAVED SILPHIUM.

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Class and Order.

SYNGENESIA POLYGAMIA NECESSARIA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum paleaceum. *Pappus* marginato-bicornis. *Cal.* squarrosus.

Specific Character and Synonyms.

SILPHIUM *trifoliatum;* caulibus angulatis glabris, foliis ternatim quaternatim verticillatis lato-lanceolatis dentatis, panicula di- trichotoma.

SILPHIUM trifoliatum. *Linn. Sp. Pl. p.* 1302. *Willd. Sp. Pl. v.* 3. *p.* 2332. *Pursh, Fl. Am. v.* 2. *p.* 378. *Elliott, Carol. v.* 2. *p.* 467. *Spreng. Syst. Veget. v.* 3. *p.* 630.

SILPHIUM ternifolium. *Mich. Am. v.* 2. *p.* 146.

A native of Carolina, Virginia, and Georgia, and received at the Glasgow Botanic Garden (along with the preceding species S. *perfoliatum*) from Dr. WRAY. It flowers at the same season, but is a less showy plant, having smaller and paler coloured flowers, and leaves more resembling those of several species of Sun-flower.

DESCR. *Stem* arising from a perennial *root,* erect, five to six feet high, purplish, smooth, angled, panicled above. *Leaves* mostly verticillate, spreading, three or four together, the lower ones often alternate, all of them scabrous, especially above, broadly lanceolate, toothed. *Panicle* branched in a di- or trichotomous manner, glabrous, with small leaves at the forkings. *Flowers* large, rather pale yellow. *Involucre* squarrose, the outer scales large, very leafy. *Corollas* of the ray about eighteen, bearing achenia, which are compressed, margined with a broad wing, and distinctly bidentate.

Fig. 1. Achenium: *magnified.*

Mrs Young del. Pub by S Curtis Glazenwood Essex Octr 1 1834. Swan Sc

JAMBOSA VULGARIS. ROSE APPLE.

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—MYRTACEÆ.)

Generic Character.

Calycis tubus turbinatus basi attenuatus, fauce ultra ovarium producta dilatata obovata, limbo 4-fido, lobis subrotundis. *Petala* 4 apici faucis inserta, lata concava obtusa. *Stamina* numerosissima petalis longiora libera stricta. *Stylus* filiformis. *Stigma* simplex acutiusculum. *Ovarium* pluriloculare multiovulatum. *Fructus* 1—2-spermus calyce ampliato et baccato grumoso-carnosus, apice umbilicatus. *Semen* angulatum, cotyledonibus carnoso-corneis crassis marginibus conferruminatis, radicula subcylindrica intra cotyledones latente. *D C.*

Specific Character and Synonyms.

JAMBOSA* *vulgaris;* racemis cymosis terminalibus, foliis angusto-lanceolatis basi attenuatis apice acuminatis. *D C.*

JAMBOSA vulgaris. *D C. Prodr. v. 3. p.* 286.

MYRTUS Jambos. *Kunth.—Spr. Syst. Veget. v.* 2. *p.* 485.

EUGENIA Jambos. *Linn. Sp. Pl. p.* 672. (excl. *syn. Rumph.*) *Mart. Mill. Dict. No. II. Sims Bot. Mag. t.* 1696 (where a flowering specimen is alone represented).

MALACCA-SCHAMBN. *Rheed. Hort. Mal. v.* 1. *t.* 17.

JAMBOEIRO. *Lusit.*

The *Rose-Apple,* a native of the East Indies, is one of the commonest garden-trees of Madeira: but there is scarcely another that combines so eminently the beauties of flower,

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* From the Indian name *Jamboo,* or *Schamber.*

fruit, and foliage. The delicate white tassel-like bunches of flowers, contrasting with the thick, dark foliage, enliven the trees from February to July or August, when the fruit is principally in season. The fullest bloom, however, is in March or April; and just after this, the trees are beautifully enriched by the fine cinnamon-coloured or reddish young leaves or shoots. Nothing can exceed the loveliness and delicate appearance of the fruit; its rich clusters half hidden by the dark, thick tufts of foliage, which clothe the outer branches: but though one or two may be eaten with some relish, the over-powering perfume and taste of rose-water, together with the want of juice or dryness, render it generally unpalatable; and it is entirely excluded, except to satisfy occasional curiosity, from the table or dessert. It is produced in the greatest profusion, but used for no other purpose than sometimes to feed the pigs, which eat it greedily.

This tree, by its thick, evergreen foliage, is admirably adapted for a screen to exclude buildings, or for shelter. It also is of rapid growth, and extremely tractable, bearing lopping well, or heading down to any height; and produces its flowers at all ages or sizes, whether as a tree or bush.

The drawing of my friend Miss Young transcends all praise; whether as a most happy illustration of character and habit, or as a truly artist-like production in its painting, grouping, and arrangement.

Descr. A handsome evergreen *tree,* from twenty to thirty or forty feet high, with a bushy but not close head of shining, fine dark green foliage: quite smooth in all its parts. *Bark* of the stem and branches cracked, but clean and even; reddish-brown. The *stem* rarely exceeds nine inches or a foot in diameter. *Branches* not much spreading, densely leafy towards the ends: the ultimate ones drooping from the weight of the fruit and flowers: all round, smooth and even. *Leaves* opposite, lanceolate, six or eight inches long, and one and a half or two broad, attenuated at the base, gradually acuminate at the apex, coriaceous, firm, and stiffish, rather faintly veined and punctate, dark shining green above, paler and opaque beneath; the young ones and shoots of a bright cinnamon-red: *Petioles* short, stout, channelled, not above a quarter of an inch long. *Flowers* large, handsome, very pale yellowish or greenish white, with a slight fragrance of Primroses or Cowslips: generally in terminal, small, close, short cymes or bunches; occasionally lateral, from the axils towards the ends of the branches. *Peduncles* either simple, bifid, or trifid; usually the latter; placed cross-ways (cruciate), and at nearly right or wide angles with the branch; very rarely more than once compound: the pedicels divaricate, stout, round, smooth and shining, jointed at the top. *Flower-buds* inversely pear-shaped, hard, firm, purplish-red below, the imbricate sepals green. *Sepals* four, patent, concave, transversely oval; permanent as a crown to the fruit, and then erect and connivent. *Petals* greenish or white, much larger than the sepals, round, very concave, erecto-patent, deciduous, with the very numerous stamens, which are curiously subspirally involute, as if in four sets, in the buds. *Filaments* long, (the outer ones an inch and a half,) white, with a very pale primrose or greenish-yellow tinge becoming deeper by age; the innermost gradually shorter; seated on a raised, prominent, suboctagonal ring at the base of the sepals. *Anthers* very small, oblong, yellowish-white. *Style* longer than the stamens, white, subulate, simple, persistent. A naked, hollow, cup-shaped square, or four-sided space surrounds its base, within the raised, staminiferous ring; but I have never seen the filaments exposing this, as figured in the Botanical Magazine, unless when part of them had fallen. On the contrary, they quite conceal the whole centre of the flower; incurving rather, and becoming denser towards the style. They retain something of a spiral tendency, acquired in the bud, for some time after full expansion. *Ovary* uniformly two-celled, containing numerous angular, narrow-oblong ovules, attached by one end to a placenta, prominent into each cell from the central axis or dissepiment. *Fruit* a subglobose, one-celled, rather dry, smooth, drupe-like berry, approaching always more or less to pear-shaped; about an inch in diameter, crowned by the persistent calyx, and umbilicate at top; of a delicate pale ochre-yellow, suffused more or less on one side with rose colour, and with a very powerful smell and taste of rose-water; the flesh about two lines thick, sweet, but somewhat dry and mealy, or rather grumose. A large cavity inside of one cell, with merely traces of the obliterated dissepiment, containing from one to three large brown *seeds*, loose and rattling within the cavity. When there is only one seed, it is the size of a marble, subglobose, but a little flattened on one side. When there are two or three, they are irregularly flattened by compression, and smaller; one however being always the largest. *Testa* brown, crustaceous, easily shelling off. *Cotyledons* from two to four or even five or six ; usually two or three ; large, bright green, punctate, of very irregular, unequal shape and size ; the external surface rounded ; inner angular. *Rev. J. T. Lowe.*

Fig. 1. Transverse Section of the Ovary: *magnified.* 2. A Seed, with part of the Testa removed, showing the four Cotyledons. 3. Two of the Cotyledons separated with the Plumule: all but fig. 1. the *nat. size.*

3357

W.J.H. del.

Pub by S. Curtis Glazenwood Essex Oct 1 1834

Swan Sc.

CALANDRINIA DISCOLOR. TWO-COLOURED-LEAVED CALANDRINIA.

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Class and Order.

POLYANDRIA MONOGYNIA.

(Nat. Ord.—PORTULACEÆ.)

Generic Character.

Cal. persistens, bipartitus, sepalis subrotundo-ovatis. *Pet.* 3—5 hypogyna aut imo calyci inserta, libera aut ima basi subconnata, æqualia. *Stam.* 4—15 toro vel basi petalorum inserta, libera, petalis sæpe alterna. *Stylus* 1 brevissimus apice tripartitus, lobulis in stigma clavato-capitatum collectis. *Capsula* oblongo-elliptica, 1-locularis, 3-valvis, polysperma. *Semina* placentæ centrali funiculis capillaribus adnexa.—Herbæ *succulentæ glabræ Americanæ habitu Samoli.* Folia *integerrima radicalia aut alterna.* Pedicelli 1-*flori axillares aut oppositifolii.* *D C.*

Specific Character and Synonym.

CALANDRINIA* *discolor;* caule suffruticoso tereti, foliis spathulato-lanceolatis acutis carnosis discoloribus supra glaucis subtus purpureo-rubris, racemis compositis terminalibus, calycibus muculatis.

CALANDRINIA discolor. *Hort. Goett.*

Among many other novel plants which adorned the Glasgow Botanic Garden in the year 1824, three species of CALANDRINIA were not amongst the least beautiful, C. *grandiflora* of Dr. LINDLEY, which we received from the Horticultural Society of London; C. *speciosa,* for which we are

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* In honor of I. C. CALANDRINI, an Italian Botanist.

indebted to Messrs. **Young** of Epsom; and C. *discolor*, from Mr. **Fischer's** collection at Gottingen, the subject of the present plate. I regret that of the two last I am ignorant of their native country: but if we may judge from their general affinity with the C. *grandiflora*, they are from Chili. Similar, however, as they are in aspect, they are totally different as species. They succeed well, treated as greenhouse plants, or better still if planted during the summer months in the open border, where both the flowers and foliage attain a larger size and a brighter hue. Flowering season July and August.

Descr. *Stem* suffruticose, succulent, much branched, flexuose, marked with the scars arising from the falling of the old leaves. *Leaves* mostly confined to the extremity, or near the extremity of the branches, lanceolato-spathulate, acute, frequently recurved, succulent, of a glaucous green on the upper surface, purplish-red beneath. *Racemes* terminal from the apex of the branches, long; pedicels compound, deflexed before and after flowering. *Flowers* large, twice the size of those of C. *grandiflora*. *Calyx* of two, concave, ovate, green leaves, spotted with black. *Petals* very large, obcordate, bright rose colour. *Stamens* 25—30. *Filaments* red, slightly downy. *Anthers* red-brown. *Pollen* orange. *Germen* broadly ovate, green: *Style* thickened, especially upwards. *Stigma* of three flattened lobes, yellow.

Fig. 1. Stamens. 2. Pistil: *magnified.*

3358

W.J.H. delt Pub. by S. Curtis Glazenwood. Essex. Octr 1834. Swan Sc

ACACIA BREVIPES. SHORT-PEDICELLED ACACIA.

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Class and Order.

POLYGAMIA MONŒCIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum bivalve. *D C.*

Specific Character.

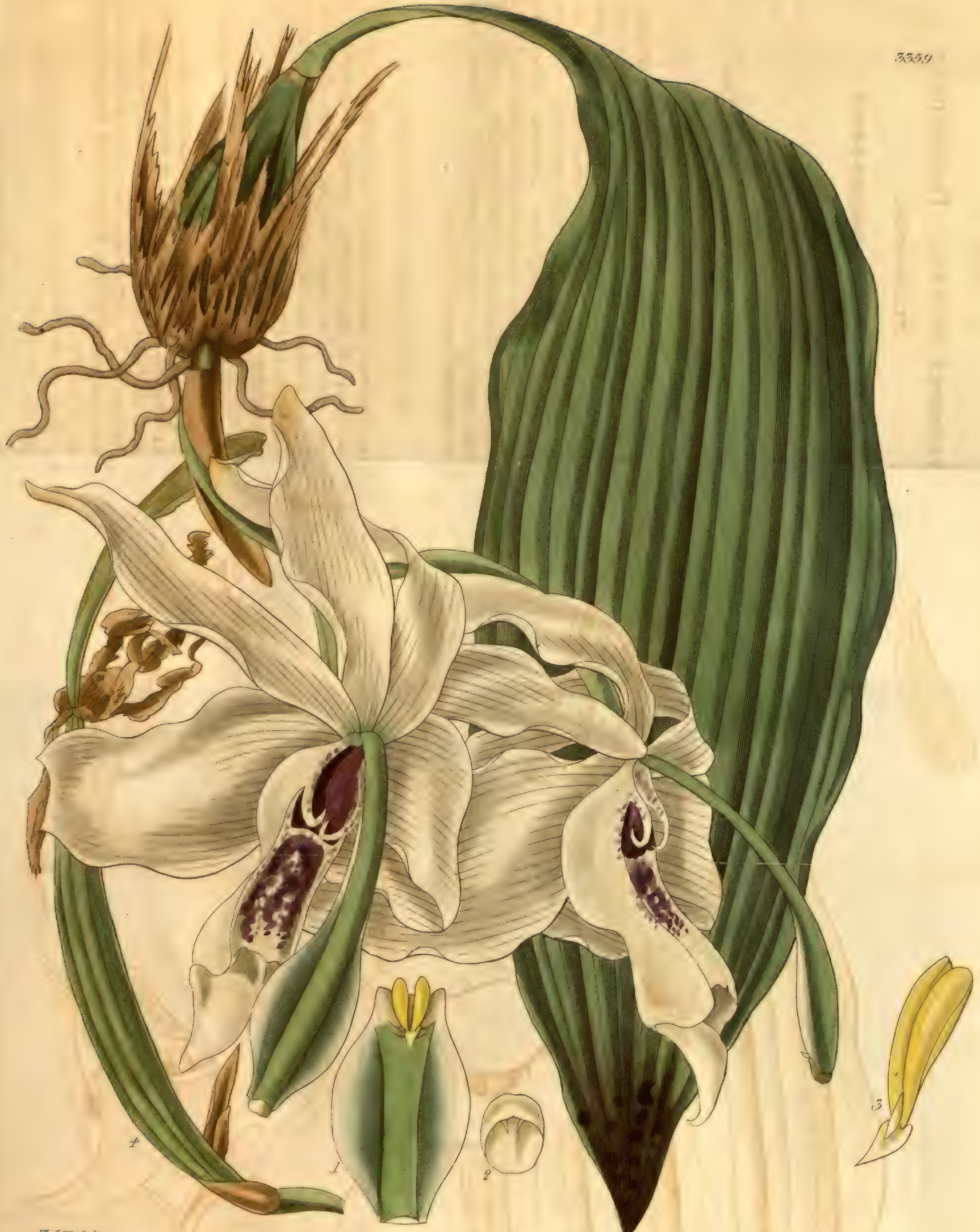
ACACIA *brevipes;* stipulis acuminatis minutis deciduis, phyllodiis lanceolato-oblongis vel sæpè elongato-lanceolatis falcatis striatis plerumque trinerviis glabris, margine antico ad basin attenuatam uniglanduloso, capitulis solitariis axillaribus brevissimè pedicellatis, pedicellis phyllodiisque junioribus cinereo-furfuraceis, floribus quinquepartitis, staminibus stylo brevioribus. *All. Cunn.*

The specimens from which our drawing was made, were obligingly communicated to us last year, by Mr. AITON, from the Royal Gardens at Kew, where this previously unnoticed species, which appears closely allied to A. *multinervia,* D C., has been cultivated for upwards of twenty years. It is said to be a native of New South Wales; and at Kew, where it is treated as a hardy conservatory plant, it usually flowers in the earlier months of the year, when its numerous congeners, under similar care in the King's Gardens, are also induced by the return of spring, to put forth their more abundant, and, in most examples, gayer, and more attractive blossoms.

Descr. A *shrub*, of rather robust growth, with erect, subangular, smooth branches. *Phyllodia* lanceolate-oblong, and frequently of a narrow, lanceolate outline, from four to six inches in length, falcate, striate, with several (more usually three) well-marked nerves, extending throughout their whole length, tapering to the base, near which, the upper margin is furnished with an oblong gland; the base itself being swollen and articulated. *Peduncle* very short, solitary, axillary, bearing a pale-yellow head of flowers, and with the younger phyllodia clothed with a grey scale-like process. *Calyx* five-cleft, each segment obtuse, ciliated. *Corolla* of five *petals*, each oblong-ovate, bluntish, erect. *Stamens* many, much shorter than the *style*.

Fig. 1. Flower:—*magnified.*

3359



W. J. H. delᵗ

Pub. by S. Curtis, Glazenwood Essex. Octʳ 1. 1834

STANHOPEA EBURNEA. IVORY-LIPPED STANHOPEA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. DIV. VANDEÆ. *Linn.*)

Generic Character.

Perianthium membranaceum, patentissimum v. reflexum. *Sepala* libera, subundulata mole sua ruentia. *Petala* conformia angustiora. *Labellum* liberum, anticum, ecalcaratum, carnosum, utrinque cornutum : dimidio superiore *(epichilio)* convexo, inferiore *(hypochilio)* excavato. *Columna* longissima, petaloideo - marginata. *Anthera* bilocularis. *Pollinia* 2, elongata, fissa, caudicula quam glandula biloba stipitata breviora.—Epiphytæ *pseudo-bulbosæ.* Folia *plicata.* Scapi *radicales, vaginati, pauciflori.* Flores *maximi, magis minusve maculati. Lindl.*

Specific Character and Synonym.

STANHOPEA *eburnea ;* labello oblongo non medio constricto, hypochilio pone basi bicorni, epichilio ovato-oblongo obtuso, metachilio duplo longiori solido plano-convexo antice truncato bidentato, scapo pendulo bifloro petalis duplo longiori. *Lindl.*

STANHOPEA eburnea. *Lindl. Bot. Reg. t.* 1529.

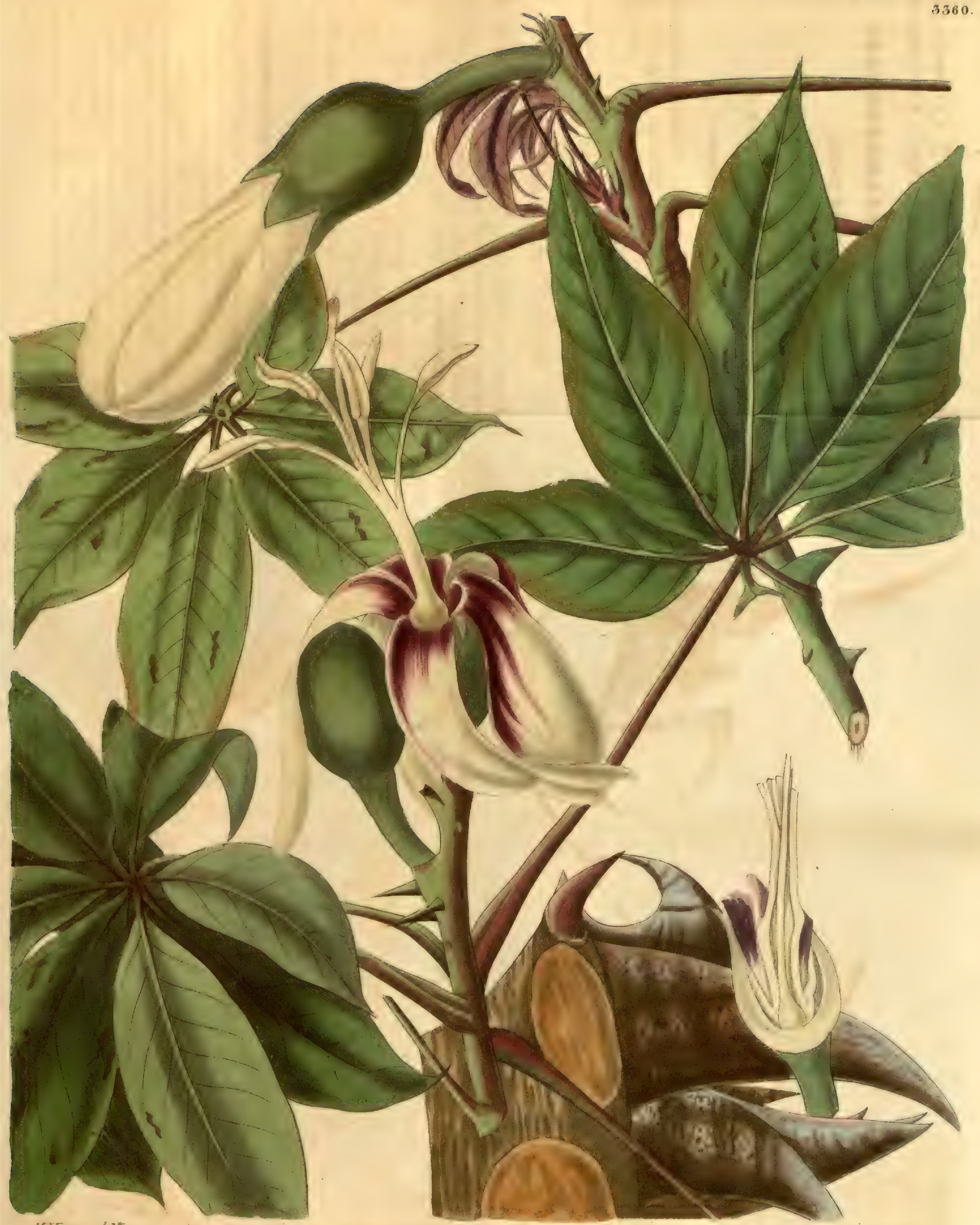
A no less peculiar, though far less beautiful plant than STANHOPEA *insignis,* figured at t. 2948 of the present work. It is a native of Brazil, a country pre-eminently rich in the tribe of ORCHIDEÆ. Our figure was taken from a remarkably fine specimen communicated in August 1833, by the Messrs. SHEPHERDS of Liverpool.

DESCR. *Bulb* ovato-conical, dark green, furrowed, clothed with ragged and anastomosing brown scales, and terminated

by a single, large, elliptical, acute, waved, and strongly-striated *leaf*. From the very base of the bulb descends a *scape*, sheathed with membranous *bracteas*, and bearing two large *flowers*. *Perianth* of an uniform ivory-white. *Lip* white, thick and fleshy, marked below, in front, with reddish-purple blotches. *Column* directed downwards, very long, semicylindrical, pale green, with a broad, membranous wing towards the extremity, remaining perfect some time after the decay of the perianth. *Anther* hemisphærical. *Pollen-Masses* club-shaped : *gland* cordate. *Germen* very long, clavato-cylindrical, furrowed.

Fig. 1. Upper portion of a Column, from which the Anther-case has been removed. 2. Anther-case. 3. Pollen-Masses. 4. Young Fruit with the withered Perianth : *magnified.*

3360.



M Young delt Pub. by S. Curtis, Glazenwood Essex Novr 1 1834. Swan Sc

ERIODENDRON ANFRACTUOSUM, β. Caribæum. FIVE-STAMENED SILK-COTTON TREE; Caribean *var.*

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Class and Order.

MONADELPHIA PENTANDRIA.

(Nat. Ord.—BOMBACEÆ.)

Generic Character.

Calyx nudus obtuse 5-lobatus. *Petala* 5 inter se et cum staminum columna connexa. *Stamina* filamenta basi in tubum brevem coalita, apice pentadelpha, adelphiis ad summum connexis filiformibus apice antheras 2—3 gerentes lineares aut anfractuosas et antheram unicam simulantes.

Specific Character and Synonyms.

ERIODENDRON *anfractuosum;* antheris anfractuosis, foliolis integris, caudice sæpius aculeato.

ERIODENDRON anfractuosum. *De Cand. Prodr. v.* 1. *p.* 479.

BOMBAX pentandrum. *Linn. Sp. Pl. p.* 959. *Cav. Diss. v.* 5. *p.* 293. *t.* 151.

BOMBAX occidentale. *Spreng. Syst. Veget. v.* 3. *p.* 124.

(α.) *Indicum,* floribus intus flavescentibus. *Rheede Hort. Malab. v.* 3. *t.* 49—51. *Rumph. Amboyn. v.* 1. *t.* 80.

(β.) *Caribæum;* floribus fauce purpureis. *Jacq. Amer.* 191. *t.* 176. *f.* 70. Tab. nostr. 3360.

(γ.) Africanum. *Brown Congo. p.* 10.

An elegant as well as singular looking tree, of which the present variety is a native of the West Indies, but cultivated in Madeira, where it rises with a clear, straight, slender *stem* to a considerable height, and then throws out somewhat distant, spreading, or nearly horizontal *branches,* which, like the stem in young trees, are covered with a shining, smooth, green *bark:* this, however, soon becomes grayish, and almost hidden by very large and remarkable, woody, or rather corky inside, sharp, conical, brown, usually straight *prickles,* which on the stem are much the size and shape of an extinguisher, presenting a most formidable and peculiar appearance. Occasionally they are bifid, or even three to six-cleft at the point. They become smaller and rarer on the branches; and on the

ultimate fresh shoots are either distant, feeble, small, or altogether wanting.

Whole plant smooth, except parts of the flower. *Leaves* palmate, deciduous; but the trees are scarcely or for a very short time quite bare, when the flower-buds appear simultaneously with the young leaves, which are of a beautiful, delicate, light green, often tinged with cinnamon-red. This happens in November or December at Madeira. *Stipules* narrow, small, linear-acuminate, patent or reflexed, deciduous. *Petioles* two to four inches long, often purplish or red; upwards round, not channelled; swollen at the base. *Leaflets* from five to seven, generally seven, oblongo-lanceolate, with a fine, withered, acuminate point; very smooth and shining above; opaque and paler, with a faint bluish tinge beneath, and a yellow, prominent midrib; a little inclined to coriaceous: the middle one largest, two to three inches long and one broad. *Petiolules* short, reddish, channelled above. *Flowers* for the most part axillary towards the ends of the branches; either solitary or two or even three together in a short kind of panicle, about the size of those of the Tulip-Tree, (LIRIODENDRON *tulipifera*, L.,) conspicuous, handsome, and with a delightful but very evanescent fragrance of primroses (PRIMULA *acaulis*. L.); abounding with honey. *Pedicel* thick, firm, erect, round, often reddish. *Bracteolæ* beneath the calyx deciduous. *Calyx* turbinato-cylindrick, splitting down a little way irregularly into five short, ovate, unequal segments: the outside perfectly smooth and shining green; inside whitish and beautifully sattiny. Before expansion the calyx resembles a young green fruit rather than a flower-bud. *Petals* five, remarkably flaccid, reflexed very soon after expansion, and drooping over the calyx as if withered, oblongo-clavate, two inches long; of a delicate pale primrose or cream colour, with the part a little above their base or claw of a deep purplish-red, spreading in streaks more or less, chiefly on one side towards their middle: the outside densely clothed with a loose, shaggy coat of soft shining, silky, fleecy hairs; inside quite smooth, and shining as if varnished. *Filaments* five, united half-way up round the germen and style into a tube or erect hollow column, which forms a swelling kind of knot covered with reddish, short, woolly hairs, apparently closing the throat of the flower: above as well as below this knot, the column is perfectly smooth, separating about half-way up into five erect or erecto-patent, antheriferous branches, or distinct filaments; each of which is channelled on the outside or beneath, and bears at its end a pair of erect, simple, parallel, linear, subsinuate *anthers*, forming apparently a single, large, ovate-oblong one. *Column* and *filaments* pale primrose or cream colour. *Pollen* and *Anthers* the same. *Style* round, long, slender, white, smooth, about the length of the stamens, tipped at the end by the small, five-lobed, crimson, subcapitate *stigma*. *Germen* enclosed in the base of the tube or column formed by the filaments, white or pale green, smooth, shining, sessile, half-ovate, five-celled, each cell containing many *ovules*. The cup-like base of the flower is half filled with honey, bathing the base of the column and petals.

Miss YOUNG, to whose admirable pencil I am indebted for a most beautiful delineation of this plant in all its parts, except the fruit, has observed that the purple stain prevails in greater intensity and extent on the same side of every petal in the same flower; but in different flowers does not uniformly keep to the same side; though still by far most commonly to that here figured. *Rev. R. T. Lowe.*

3361.

Pub. by S. Curtis Glazenwood Essex Novr 1 1834.

Swan sc.

ŒNOTHERA DRUMMONDII. MR. DRUMMOND'S EVENING-PRIMROSE.

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ONAGRARIÆ.)

Generic Character.

Calyx 4-sepalus, sepalis coalitis in tubum longum tetragonum vel octo-costatum, limbo parteque tubi post anthesin caduco. *Petala* 4. *Stamina* 8, erecta vel declinata, polline triangulari viscoso. *Stigma* 4-fidum vel sphæricum. *Capsula* oblongo-linearis, obtuse tetragona vel obovato-clavata, 4-locularis, 4-valvis, polysperma, cum basi calycis coalita.—Herbæ *vel* Suffrutices. Folia *alterna, sæpius dentata, laciniata vel pinnatifida.* Flores *axillares solitarii aut terminales spicati.* Corolla *flava, rarius aurantiaca aut purpurea.*

Specific Name and Character.

ŒNOTHERA *Drummondii;* pubescenti-mollis procumbens, staminibus subdeclinatis, foliis oblongo-ellipticis obtusiusculis sinuato-dentatis inferioribus in petiolum attenuatis, floribus axillaribus, petalis magnis luteis, capsulis (immaturis) cylindraceis striatis pubescenti-hirsutis.

The indefatigable DRUMMOND, the Assistant-Naturalist in Capt. Sir JOHN FRANKLIN'S over-land expedition, bids fair to make as valuable Botanical collections in the extreme Southern territories of the United States, as he did in the British Possessions of North America. From Louisiana, whence among other interesting plants he has added to our gardens the rare NUTTALLIA *Papaver* and SARRACENIA *psittacina,* he has entered the province of Texas, and from the embouchure of the Rio Brazos and from San Felippe de Austin in the interior, he has sent very valuable despatches both of the animal and vegetable productions. The present is one of two ŒNOTHERAS, of which seeds were transmitted from Brazosia, both of which have flowered copiously in the Glasgow Botanic Garden, during the months of August and September. In size and colour, the blossom vies with those of ŒNOTHERA *macrocarpa, Missouriensis,* and *grandiflora,* but in other respects differs considerably from them and from every other with which we have had an opportunity of comparing it. It flourishes in the open air though a native of Texas.

DESCR. *Stem* decumbent, branched, succulent, soft with down as is the whole foliage, ten or twelve inches long in the wild specimens, attaining to a foot and a half or two feet in cultivation. *Leaves* three to five inches in length, elliptical, oblong, the upper ones obscurely toothed and sessile; the lower sinuato-dentate, tapering at the base, so that they may be reckoned petiolated. From the axil of each of [illegible]e leaves, a solitary large *flower* appears, destitute of fragrance. *Peduncle* short. *Calyx* often split into four segments and reflexed. *Petals* large, bright yellow, broadly rotundato-cordate, very patent. The young *fruit* is nearly cylindrical, striated, downy, scarcely more than an inch long, and but little thicker than the peduncle.

Fig. 1. Lower portion of a stem with young Fruit: *nat. size.*

W. J. H. del.t

Pub. by S. Curtis. Glazenwood, Essex. Nov.r 1 1834.

Swan Sc.

MALESHERBIA LINEARIFOLIA. LINEAR-LEAVED MALESHERBIA.

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Class and Order.

PENTANDRIA TRIGYNIA.

(Nat. Ord.—PASSIFLOREÆ. Tribe, MALESHERBIACEÆ.)

Generic Character.

Calyx persistens, tubulosus, membranaceus, inflatus, 10-nervius, lobis 10 duplici ordine dispositis, per æstivationem imbricatis, fauce in coronam 10-dentatam producta. *Stamina* 5 exserta. *Antheræ* incumbenti-erectæ. *Ovarium* stipitatum 1-loculare. *Styli* 3 longissimi, infra apicem ovarii orti. *Stigmata* clavata. *Capsula* trigona. *Placentæ* 3 parieti capsulæ infra dehiscentiæ locum insertæ. *Semina* strophiola fungosa donata. *Albumen* carnosum. *Embryo* teres. *Cotyledones* orbiculatæ crassæ.—Plantæ *pubescentes ramosæ basi suffrutescentes.* Folia *alterna simplicia.* Flores *lutei. D C.*

Specific Character and Synonyms.

MALESHERBIA* *linearifolia;* pubescenti-glandulosa, foliis linearibus dentatis basi stipulatis, stipulis tripartitis, calycis fauce dilatata, ovario subgloboso.

MALESHERBIA linearifolia. *Poir. in Encycl. Bot. Suppl. v. 3. p.* 581.

MALESHERBIA paniculata. *Don in Ed. Phil. Journ.* 1827, *p.* 321.

GYNOPLEURA linearifolia. *Cav. Ic. v.* 4. *p.* 52. *t.* 376. *Spr. Syst. Veg. v.* 1. *p.* 947.

MALESHERBIA coronata. *Don in Sw. Br. Fl. Gard. t.* 167.

The present is one of the many interesting Chilian Genera for which our gardens are indebted to Mr. CUMING.

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* In honour of LAMOIGNON DE MALESHERBES, an illustrious French patriot and agriculturist.

It flowered in the Glasgow Botanic Garden, where it is treated as a greenhouse plant, in the month of September of the present year (1834). It has a very extensive range in its native country among the Andes of Chili, and appears to be liable to considerable variation, especially in the configuration of the corona.

Descr. *Stem* annual (?) a foot or a foot and a half high, in our specimens panicled above, clothed, as is every part of the herbage, with glandular pubescence. *Leaves* about two or three inches long, linear, obtuse, toothed, recurved, having what appear to me a pair of tripartite *stipules* at the base, although authors characterize the foliage as *exstipulate*. *Panicle* of several large, delicate, but not highly coloured *flowers*. *Perianth* greenish-purple, glandular, striated; the *tube* elongated, dilated upwards; the mouth crowned in our specimens with an interrupted, annular membrane; the *limb* ten-cleft, spreading, of which the five outer segments, which alone seem to belong to the calyx, are ovate, the five inner ones or *petals* roundish-rhomboidal, subunguiculate, nerved, pale purplish-blue. *Stamens* and *pistil* stipitate. *Filaments* five, exserted. *Anthers* oblong, dark purple. *Ovary* 3—4-lobed, woolly, bearing a long, filiform *style* on the summit of each lobe.

Fig. 1. Portion of the Stem and Leaf with Stipules: *nat. size.* 2. Portion of the Perianth. 3. Stipitate Stamens and Pistil. 4. Germen with the bases of the Stamens and Style. *Magnified.*

3363.

W. J. H. del.t Pub by S. Curtis Glazenwood Essex Novr. 1 1834. Swan Sc

MIMULUS LUTEUS, *var.* Youngana. YELLOW CHILIAN MONKEY-FLOWER; MR. YOUNG'S *variety.*

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Cal. prismaticus 5-dentatus. *Cor.* subcampanulata, limbo $\frac{2}{3}$, lobis subæqualibus. *Stigma* bilamellatum. *Dissepimenta* lateribus placentifera. *Spr.*

Specific Character and Synonyms.

MIMULUS *luteus;* caule (erecto vel) decumbente glabro, foliis dentatis supra pubescentibus (v. glabris), superioribus sessilibus ovato-cordatis inferioribus petiolatis, pedunculis filiformibus folio longioribus, corolla calyce multoties majore, laciniis transversis, palato barbato. *Lindl.*

MIMULUS luteus. *Linn. Sp. Pl. p.* 884. *Spreng. Syst. Veget. v.* 2. *p.* 799. *Lindl. in Bot. Reg. t.* 1030 (non Bot. Mag.)

GRATIOLA foliis subrotundis, &c. *Feuill. Per. p.* 745. *t.* 34.

(α.) *rivularis;* caulescens, multiflorus. *Lindl. l. c. cum Ic.*

(β.) *alpinus;* subacaulis, uniflorus, foliis minoribus. *Lindl. l. c.*

(γ.) *variegatus;* caule erecto, corolla pallide flava, segmentis omnibus purpureis. *Hook. Bot. Mag. N. Ser. t.* 3336. MIMULUS variegatus. *Lodd. Bot. Cab. t.* 1872.

(δ.) *Youngana;* caule decumbente, corolla intense lutea limbi laciniis omnibus macula magna cruenta. (Tab. nostr. 3363.)

We have before, at Tab. 3336, stated our opinion that the M. *luteus* is subject to much variation, especially in the markings of its flowers. The present is certainly among

the most beautiful, having the corolla of a rich full yellow, and every segment marked with a large blotch of a rich red-brown inclining to blood colour. It is perfectly hardy, and flowers in July and August in the Glasgow Botanic Garden, where it was received from Mr. LODDIGES, under the name here adopted. We possess wild specimens of the same variety, from its native country Chili.

3364.

Pub. by S. Curtis. Glazenwood. Essex Nov.r 1. 1834.

Swan Sc.

FUCHSIA GLOBOSA. BALLOON-FLOWERED FUCHSIA.

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ONAGRARIÆ.)

Generic Character.

Calycis tubus basi ovario adhærens, superne productus in tubum cylindraceum 4-lobum post anthesin articulatim deciduum. *Petala* 4, summo tubo inserta, lobis alterna, rarius o. *Stamina* 8. *Ovarium* glandula urceolata coronatum. *Stylus* filiformis. *Stigma* capitatum. *Bacca* oblongo- aut ovato-globosa, 4-locularis, 4-valvis, polysperma. —Frutices. Folia *sæpius opposita.* Pedicelli *axillares* 1-*flori, interdum ad apices ramorum racemosi.* Flores *sæpius nutantes, rubri rarius albi, interdum* 5-*fidi* 10-*andri.*

Specific Character and Synonym.

FUCHSIA *globosa;* foliis oppositis petiolatis ovatis acutis læviter dentatis glabris, floribus axillaribus pendulis, limbo alabastri globoso floris aperti connivente, petalis erectis convolutis duplo brevioribus. *Lindl.*

FUCHSIA globosa. *Lindl. in Bot. Reg. t.* 1556.

This beautiful FUCHSIA was first published by Dr. LINDLEY, who says of it, that its origin is unknown, and that the first specimen he saw was exhibited in March, 1832, at the Horticultural Society of London by Mr. DENNIS of Chelsea; it was about two feet high, had been skilfully trained in a fan shape upon a small trellis, and produced a very beautiful effect.

It is of more humble growth and has more trailing branches than any of the species with which we are ac-

quainted of the same section ; yet except in the very globose figure of the flower in the state of bud and the "balloon appearance" of the same when fully expanded, it would be difficult to point out characters by which it may be distinguished from its allies, especially the F. *gracilis* of LINDLEY and our gardens : and Mr. DON is probably correct in making it a variety of F. *macrostemma* of RUIZ and PAVON, to which he also unites as other varieties, F. *conica,* LINDL. Bot. Reg. t. 1556 ; F. *gracilis,* LINDL. Bot. Reg. t. 847 ; and F. *decussata,* GRAHAM (and SIMS in Bot. Mag. t. 216). Our present plant Mr. DON considers to be wholly a production of the gardens.

3365.

W.H. del. Pub. by S. Curtis Glazenwood Essex Nov. 1 1834. Swan sc.

SALPIGLOSSIS STRAMINEA, *var.* picta. STRAW-COLOURED SALPIGLOSSIS: painted *var.*

Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.—SOLANEÆ. *Sweet.*)

Generic Character.

Cal. 5-fidus, subinæqualis. *Cor.* infundibuliformis, limbo 5-lobo. *Filamentum* quintum sterile. *Stylus* apice dilatatus. *Capsula* bilocularis, dissepimento valvis parallelo.

Specific Character and Synonyms.

SALPIGLOSSIS[*] *straminea*; glanduloso-viscida, stylo edentulo.

SALPIGLOSSIS straminea. *Hook. Ex. Fl. t.* 229. *Sw. Br. Fl. Gard. t.* 231.

(β.) *picta*; corollis pulcherrime violaceo-pictis. *Tab. nostr.*

SALPIGLOSSIS picta. *Sw. Br. Fl. Gard. t.* 258.

That the present very elegant plant is a mere variety of SALPIGLOSSIS *straminea*, no one, I think, can reasonably entertain a doubt who has been in the habit of cultivating that variable plant and seen how much individuals raised from seed are liable to sport. I am not at all satisfied that the S. *atro-purpurea* of my valued friend Dr. GRAHAM (Bot. Mag. t. 2811) is specifically distinct from it: and these again scarcely differ from the original S. *sinuata* of RUIZ and PAVON, except in the absence of the tooth on the top of the style, and in colour. To the excellent description of Dr. GRAHAM above alluded to (t. 2811) I may refer for a full character of this plant, save what concerns the colour of the corolla, which in our plant is straw-coloured, deep-yellow within, tinged with rose on the centre of the lobes, and beautifully marked, within and without, with deep red-purple veins.

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[*] From σαλπιγξ, a *trumpet*, and γλωσσα, a *tongue*, from the somewhat tubular, yet tongue-shaped extremity of the style.

Mr. NEILL first reared this very elegant variety in his choice and well-kept collection at Canon-Mills, near Edinburgh, and our specimen was from the open border of the garden of A. BOGLE, Esq. of Gilmour Hill, near Glasgow, where the full-grown plants, two to three feet high, made a very handsome appearance.

3366.

M. Young del.
Pub. by S. Curtis Glazenwood, Essex, Nov. 1 1834.
Swan Sc.

Acacia plumosa. Feathery Acacia.

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Class and Order.

Polygamia Monœcia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Flores polygami. *Calyx* 4—5-dentatus. *Petala* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stamina* numero varia, 10—200. *Legumen* continuum. *D. C.*

Specific Character and Synonyms.

Acacia *plumosa;* aculeolata, aculeis sparsis minutis recurvis, caule late diffuso scandente tereti, ramulis sulcatis petiolis rachibusque subtus aspero-aculeolatis pubescentibus, foliis 2-pinnatis, pinnis sub 18—20-jugis, glandula inter 8—11 ultima paria cylindrica et altera supra basin petioli oblonga, foliolis sub 45—50-jugis linearibus obtusiusculis minutis imbricatis glabriusculis seu minutissime puberulis, spicis pedunculatis pluribus axillaribus in paniculam terminalem basi foliatam fulvo-velutino-villosam dispositis, leguminibus planis latis oblongis. *Lowe.*

Acacia scandens. *Willd. Enum. p.* 1057*?* *De Cand. Prodr. v.* 2. *p.* 465*?*

Acacia pennata. *Willd. Sp. Pl. v.* 4. *p.* 1090*?* *De Cand. Prodr. v.* 2. *p.* 464*?*

Mimosa pennata. *Linn. Sp. Pl. p.* 1507.?

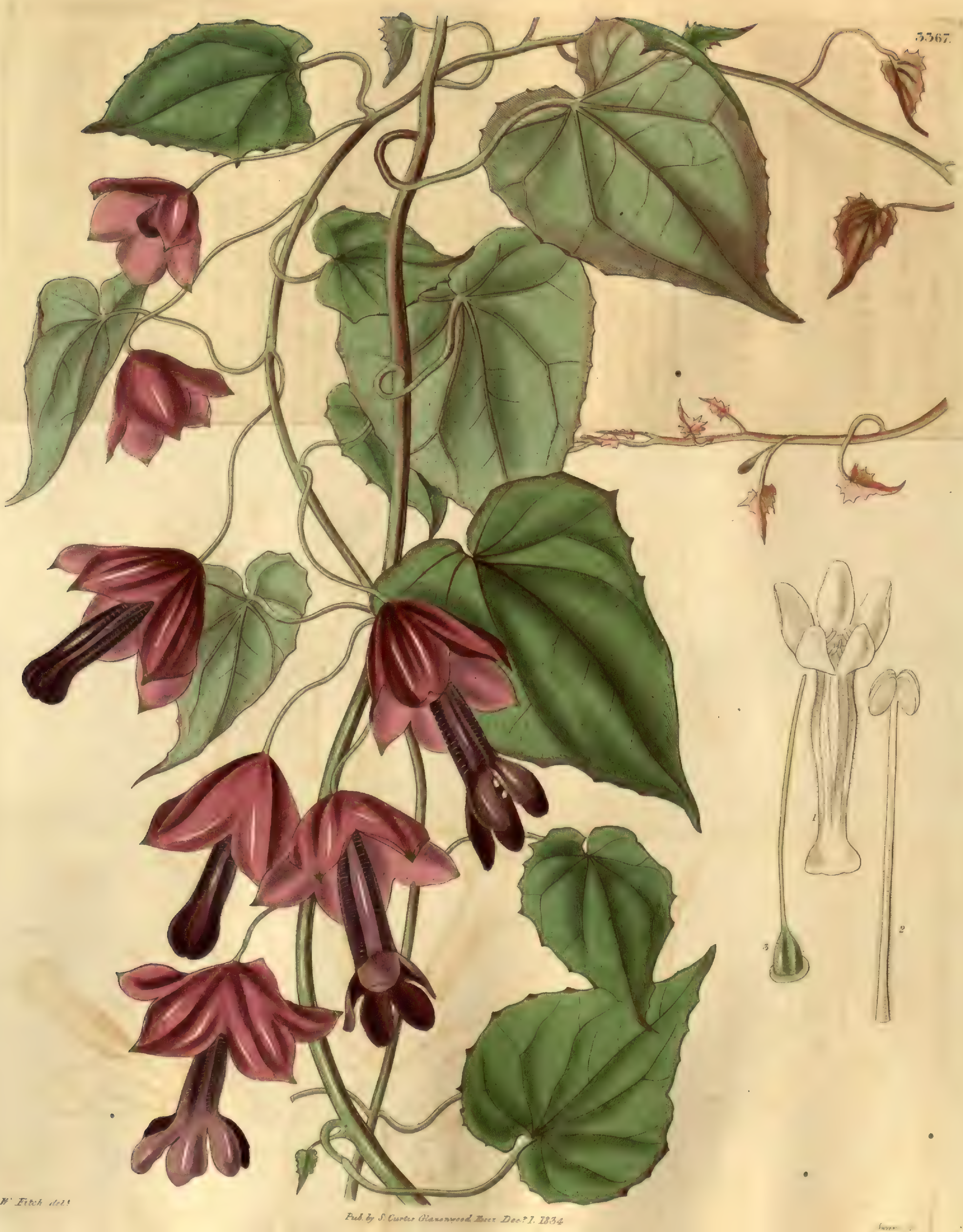
A most elegant climbing *shrub,* with long weak, diffuse, interweaving branches, clinging and supporting themselves by means of their very short, recurved, weak prickles, which are inconspicuous to the eye, though at once perceptible to the touch. The prickles are found on every part of the plant, except the peduncles, and secondary rachises of the leaves: they are also generally worn off the old branches and stems. These, when old, are pale brown or gray, as well as smooth and round: but the young green ones are strongly sulcated and angular, and more or less pubescent with short, woolly, fulvous, glandular hairs. *Foliage* most delicate and lovely; the *leaves* resembling gracefully curved or drooping plumes of feathers; of a fine, bright, peculiar, yellow-green, six or eight inches long, and two to four broad. *Stipules* very minute, narrow-ovate, erect, withering. *Stipells* ovato-acuminate, permanent. *Petioles* geniculate at the base; the part below the elbow two lines long, thickened and cylindrical; above, an inch long, angular and slender, the upper-side channelled, with an oblong, hollow, boat-shaped *gland* a little above the elbow: copiously clothed with short, glandular, fulvous pubescence, and furnished with recurved, scattered prickles beneath, like the main *rachis*, which is elegantly curved. *Secondary rachises* similarly pubescent, but not prickly; one to two inches long, slightly curved, rarely fewer than eighteen, or more than twenty pair (except towards the end of the branches): from eight to eleven of the upper pairs have a small cylindrical, elevated, hollow, green *gland* at their origin, on the main rachis. *Leaflets* very minute and delicate, apparently smooth and naked, but through the lens minutely and irregularly puberulous, especially at the edges; very small, numerous, and close together, linear, rather obtuse, straight or nearly so, with the midrib almost central, scarcely two lines long, and only one-fifth as broad; from forty to fifty pair or thereabouts. They close up and lose all their beauty towards four or five o'clock in the afternoon. The *spikes* (not *heads*) of flowers are short and oblong, pale ochre-yellow, produced four or five together from the axils of the upper leaves, which become less and less developed, towards the ends of the branches, so as to form a long irregular sort of terminal, leafy, compound, branched *panicle;* slightly fragrant. *Pedicels* half to three quarters of an inch long, round, unarmed, densely fulvo-pubescent. *Spikes* oblong, abbreviate, about half an inch long. *Calyx* very minutely pubescent; in five shallow segments like the corolla; both pale green. *Stamens* very numerous. *Anthers* simple. *Legume* large, five to six inches long and one broad; flat and generally thin; to the naked eye smooth, but to the touch and through the lens very closely and minutely velutino-puberulous; dark reddish-brown, with paler veins branching off at right angles with the sides, which are often somewhat sinuate: within one-celled and quite dry; truly that of our ACACIA. It is usually blunt, with a short point at the apex, attenuated and stipitate at the base. *Seeds* numerous, (ten to twelve,) rather large, flattened but convex in the middle, oblong or oval, shining, dark brown, approaching to black; the edges thin and darker than the raised middle; about five lines long, and two to four broad.

Though the flowers of this plant are not remarkably conspicuous, it is impossible to conceive any thing more graceful and elegant than the thick, tufted, feathery foliage, or the extreme delicacy and symmetry of its parts. The pod and seed are singularly large in proportion to the rest of the plant. *Rev. R. T. Lowe.*

[My valued friend, Mr. LOWE, does not give the native country of this plant, which is without doubt cultivated in Madeira, and would be a most desirable inmate of our stoves: nor does he make any remarks on the species he doubtfully adduces as synonyms. Nor will I venture to offer an opinion without an examination of original specimens. The accompanying figure and full description of a beautiful species of a most difficult Genus, cannot but be acceptable to our readers. ED.]

Fig. 1. Side view of a single Flower. 2. A Flower seen from beneath. 3. A Seed, *nat. size.* 4. Lower part of a Leaf with Petiole. 5. Upper part of the same. Fig. 1, 2, 4, and 5 more or less *magnified.*

3367.



W. Fitch del.

Pub by S. Curtis Glazenwood Essex Dec.r 1. 1834

Swan

(3367)

RHODOCHITON VOLUBILE. TWINING RHODOCHITON.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Calyx membranaceus, coloratus, campanulatus, 5-fidus. *Corolla: tubus* anguloso-clavatus, interne pilis simplicibus reflexis, basi ubique, faucem versus 5-fariam vestitus; *limbus* 5-partitus, segmenta subæqualia, erecta. *Stamina* didynamia, rudimento quinti, erecta, apicibus simplicibus. *Stylus* sub stigmate rectus.

Specific Name and Synonym.

RHODOCHITON* volubile. *Zuccarini.*
LOPHOSPERMUM Rhodochiton. *Don in Sweet's Brit. Fl. Gard. t. 250.*

This plant, a native of Mexico, was received at the Botanic Garden, Edinburgh, from Mr. Low of Clapton, who had it from Berlin, and it has flowered very freely with us in the open border during September, and will no doubt continue to do so during October. It seems perfectly hardy, and is highly ornamental. I regret that I have not seen the original observations on the Genus by ZUCCARINI; but I cannot agree with Mr. DON in uniting it with LOPHOSPERMUM; though undoubtedly these Genera are very nearly allied. The following contrast shows the ground of this opinion.

RHODOCHITON. *Calyx* membranous, five-cleft, campanulate, segments connivent in the bud and long after. *Corolla,* tube clavato-cylindrical,

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* From ροδος, *red,* and χιτων, a *garment;* I presume from the red colour of the enlarged calyx.

drical, with distinct angles, hairs on the inside reflected, and occupying the five angles; limb erect. *Stamens* subexserted, *filaments* nearly glabrous, erect, simple at the apex. *Style* scarcely deflected, straight below the *stigma*.

Lophospermum. *Calyx* herbaceous, five-parted, segments prominent at the edges and spreading at the apices even in the youngest state of the bud. *Corolla*, tube campanulate, turgid below, hairs on the inside erect, and occupying two dense lines; *limb* spreading. *Stamens* included, *filaments* deflected, glandular towards the *anthers*, with a tubercle or short blunt branch at the apex. *Style* deflected, bent to a right angle immediately below the *stigma*.

Descr. *Stems* filiform, branched, twining, subcylindrical, firm, purple, sparingly covered with minute, glandular hairs. *Leaves* (fully three inches long, nearly as much broad) alternate, petioled, rounded and cordate at the base, acuminate, lobed, dentate, strongly nerved, when young of a dark greenish purple, when older bright green above, below pale and at length with a purple tinge, sparingly covered with short, glandular pubescence on both surfaces; *nerves* prominent below, channelled above; *Petioles* about as long as the leaf beyond the sinus, twining, channelled above. *Peduncles* axillary, solitary, pendulous, filiform, purple, longer than the leaves, flexuose and spirally twisted, when young glanduloso-pubescent, afterwards nearly glabrous, shining. *Flower-buds* ovate. *Flowers* pendulous. *Calyx* (nearly one inch long, rather more across,) campanulate, spreading from the base, five-cleft, shining, deep purple, reticulated, externally slightly glanduloso-pubescent, and afterwards nearly glabrous on the inner surface, pretty copiously covered with rather long, glandular pubescence; *lobes* ovate, acute, in the bud closely imbricated, after expansion slightly connivent, and later somewhat spreading at the apices. *Corolla* twice as long as the calyx, of much deeper, duller purple than it, covered externally with glandular pubescence; *tube* clavato-cylindrical, unequally five-sided, dilated at its base where it encloses the germen, internally towards its base, uniformly and rather densely covered with blunt, white, inverted, simple pubescence, which higher in the tube is nearly confined to the longitudinal angles, corresponding to the external depressions, and is nearly wanting on the uppermost of these; *limb* glabrous within, and externally less pubescent than the tube, of five, elliptical, blunt, erect lobes, of which the two upper are rather the shortest and broadest, the lowest is narrowest and rather the longest. *Stamens* subequal, rather longer than the tube; *filaments* straight, purple, glabrous, shining and filiform above, near their base dilated somewhat and flattened, paler and covered with inverted hairs similar to those on the inside of the tube to which they adhere (at the same time becoming smooth) as it passes round the germen; *anthers* smooth, dark violet-coloured, *lobes* elliptical, divaricated, bursting along their outer edges; *pollen* white, *granules* minute, oblong. There is a minute, abortive stamen between the bases of the two upper perfect ones. *Stigma* of two minute, erect, white *lobes*. *Style* filiform, scarcely deflected, rather longer than the stamens, glabrous, or with a very few scattered hairs towards the base. *Germen* green, ovate, compressed, glanduloso-pubescent, placed obliquely upon a smooth, fleshy disk. *Ovules* very numerous, globular, on podosperms as long as themselves. *Graham.*

Fig. 1. Corolla, removed from the Calyx. 2. Stamen. 3. Pistil.

3368.

W.J.H. delᵗ

Pub by S. Curtis Glazenwood Essex Decʳ 1. 1834

Swan Sc.

GAILLARDIA BICOLOR, *var.* Drummondii. TWO-COLOURED GAILLARDIA; Drummond's *var.*

* * *

Class and Order.

SYNGENESIA FRUSTRANEA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Receptaculum paleaceum, hemisphæricum. *Pappus* paleaceus. *Involucrum* imbricatum, planum, polyphyllum. *Cor.* radii trifidi.

Specific Character and Synonyms.

GAILLARDIA bicolor. *Lam.*
(α.) *vulgaris ;* radio elongato basi sanguineo.
GAILLARDIA bicolor. *Lam. Encycl. v.* 2. *p.* 585. *Ait. Hort. Kew. ed.* 2. *p.* 129. *Pursh, Fl. Am. v.* 2. *p.* 572. *Sims, Bot. Mag. t.* 1602. *Hook. Fl. Bor. Am. v.* 1. *p.* 315.
(β.) *Drummondii ;* radio breviori, toto fere sanguineo. *(Tab. nostr.* 3368.*)*
(γ.) *aristata ;* radio elongato unicolori.
GAILLARDIA bicolor, *var. Nutt. Gen. Am. v.* 2. *p.* 175. *Spreng. Syst. Veget. v.* 3. *p.* 618.
GAILLARDIA aristata. *Pursh, Fl. Am. v.* 2. *p.* 573. *Lindl. Bot. Reg. t.* 1186. *Hooker, Bot. Mag. t.* 2940. *Hooker, Fl. Bor. Am. v.* 2. *p.* 315.

The very pretty GAILLARDIA here figured was raised in the Glasgow Botanic Garden, from seeds gathered by Mr. DRUMMOND at Rio Brazos, in Texas, in the autumn of 1833. It retains all the character of the wild specimens sent by the same indefatigable collector, except that the plants are larger and the foliage coarser. But this foliage is very variable, entire or more or less toothed or incised, the lowermost and radical leaves pinnatifid, with a greater or less number of segments, and indeed quite similar to that of G. *bicolor* and G. *aristata* of authors. The flowers indeed appear different from both of those; but this difference is more dependent on colour, than any thing, and an attentive examination of numerous specimens of all three, both cultivated and wild, have led me to the conclusion that they are in reality varieties of one and the same species, which has thus a most extensive range, from the Gulf of Mexico, in lat. 24° to the Saskatchewan in lat. 52°, and from the Atlantic Ocean to the Columbia. Our Texas plant has a shorter ray than the other varieties, but is chiefly distinguished by the deep sanguineous colour of almost the whole of the ray of the flower, so that the tips alone are yellow. The florets of the disk are more inclined to purple, especially at the extremity.

The specimen, from which our drawing was made, presented another remarkable feature, in the florets of the ray having, every one of them, a bilabiate corolla, the outer with three large teeth and five branching nerves, the inner much smaller, lanceolate, with three such nerves. Other specimens from the same root had the ray only partially of this character.

Fig. 1. Floret of the Ray with a two-lipped Corolla. 2. Extremity of the Style. 3. Floret of the Disk. 4. Scale of the Pappus. 5. Small chaffy Scales of the Receptacle: magnified.

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W. J. H. del.

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Swan Sc.

(3369)

CALANDRINIA GRANDIFLORA. LARGE-FLOWERED CALANDRINIA.

* * *

Class and Order.

POLYANDRIA MONOGYNIA.

(Nat. Ord.—PORTULACEÆ.)

Generic Character.

Cal. persistens, bipartitus, sepalis subrotundo-ovatis. *Pet.* 3—5 hypogyna aut ima calyci inserta, libera aut ima basi subconnata, æqualia. *Stam.* 4—15 toro vel basi petalorum inserta, libera, petalis sæpe alterna. *Stylus* 1 brevissimus apice tripartitus, lobulis in stigma clavato-capitatum collectis. *Capsula* oblongo-elliptica, 1-locularis, 3-valvis, polysperma. *Semina* placentæ centrali funiculis capillaribus adnexa.—Herbæ *succulentæ glabræ Americanæ, habitu* Samoli. Folia *integerrima radicalia aut alterna.* Pedicelli *uniflori axillares aut oppositifolii. D C.*

Specific Character and Synonym.

CALANDRINIA *grandiflora;* caule suffruticoso, foliis carnosis rhomboideis acuminatis glaucis basi in petiolum attenuatis, racemis terminalibus laxis simplicibus, calycibus maculatis.

CALANDRINIA grandiflora. *Lindl. Bot. Reg. t.* 1194.

At t. 3357, we have given a figure of one of three beautiful and nearly allied CALANDRINIÆ, which we mentioned as having been lately introduced to our gardens. The present is a second of these, and one that in the climate of Scotland at least flourishes during summer in the open border better than the *discolor,* throwing out many branches, each terminated by a long raceme, of which only one flower is open at a time, and when the flower is past, each pedun-

cle is singularly reflexed, the persistent calyx closing over the ripening germen.

Descr. The *stem*, though succulent, is somewhat shrubby, rounded, and like every part of the plant quite glabrous, the branches spreading, the younger ones green and glaucous. *Leaves* scattered, four or five inches long, glaucous, fleshy, rhomboidal, tapering at the extremity into a peculiarly short point and at the base so much attenuated as to appear petiolated, of the same colour below as above. *Racemes* terminal, solitary upon each branch, undivided. *Pedicels* an inch and a half to two inches long, remote, subsecund, having two green and membranous, ovate *bracteas* at their base, erect in flower, afterwards reflexed. *Calyx* of two ovate, concave, green spotted with brown, membranaceous leaves or sepals. *Corolla* large, of five broadly obovate, almost obcordate *petals*, of a fine purple rose-colour. *Stamens* about thirty, hypogynous, purple. *Germen* broadly ovate, green; *Style* purple.

Pub. by S. Curtis Glazenwood Essex Dec.r 1. 1834.

Swan Sc.

NIEREMBERGIA FILICAULIS. SLENDER-STEMMED NIEREMBERGIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—SOLANEÆ.)

Generic Character.

Calyx tubulosus, 5-fidus. *Corolla* subhypocrateriformis tubo longissimo tenui; limbo 5-lobo, plicato (sub-) æquali. *Stamina* 5, exserta. *Filamenta* inferne connata (an semper ?). *Antheræ* longitudinaliter dehiscentes. *Stigma* subinfundibuliforme, bilobum (nobis laterale transverse oblongum utrinque acuminatum recurvum). *Capsula* infundo calycis persistentis bilocularis, bivalvis; *dissepimentum* valvulis parallelum demum liberum; *placentæ* dissepimento intimæ adnatæ.—Caules *lignosi aut herbacei, filiformes, procumbentes et sæpe repentes.* Folia *sparsa, solitaria, interdum gemina, integra et integerrima.* Flores *extra-axillares aut oppositifolii, solitarii, subsessiles, albi.* ***Kunth.***

Specific Character and Synonyms.

NIEREMBERGIA *filicaulis;* erecta glabra, ramis diffusis filiformibus laciniis calycinisque lineari-acuminatis, filamentis pubescenti-glandulosis.
NIEREMBERGIA filicaulis. *Lindl. Bot. Reg. t.* 1649.

This is a remarkably pretty species of NIEREMBERGIA, flowering copiously during the summer months, in a cool part of the greenhouse. It is well named *filicaulis* by Dr. LINDLEY, who suspected that the species was a native of Mexico: but the seeds of the plants raised in the Glasgow Botanic Garden, were sent by Mr. TWEEDIE from Buenos Ayres, along with dried specimens of the same species. The corolla

rolla is liable to some variation in colour, from an almost pure white to a rose-purple. The eye, however, is always yellow with a radiating, deep purple ring.

DESCR. *Stem* a foot or more high, bearing copious, filiform, spreading, glabrous *branches*. *Leaves* alternate, linear, or linear-lanceolate, somewhat acute, single-nerved, glabrous. *Flowers* numerous, both lateral, (axillary,) and terminal. *Peduncles* almost an inch long, slender. *Calyx* with the *tube* funnel-shaped, the *limb* of five rather long, linear-lanceolate, spreading segments. *Tube of the Corolla* scarcely an inch long, very slender, generally curved: *limb* large, very spreading, plaited and five-lobed. *Filaments* standing close together, and arising from the mouth of the tube, unequal, pubescenti-glandular. *Anthers* yellow, in part enclosed by the transverse stigma.

Fig. 1. Portion of the Tube of the Corolla bearing the Stamens, the Anthers partly enclosed by the Stigma. 2. Portion of the Style and Stigma. 3. Leaf: *magnified.*

Pub. by S. Curtis. Glazenwood Essex. Dec.r 1. 1834.

Swan Sc.

NIEREMBERGIA CALYCINA. LARGE-FLOWERED NIEREMBERGIA.

* *

Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—SOLANEÆ.)

Generic Character.

Calyx tubulosus, 5-fidus. *Corolla* subhypocrateriformis, tubo longissimo tenui; limbo 5-lobo, plicato (sub-) æquali. *Stamina* 5, exserta. *Filamenta* inferne connata (an semper?). *Antheræ* longitudinaliter dehiscentes. *Stigma* subinfundibuliforme, bilobum, (nobis laterale, transverse oblongum, utrinque acuminatum, recurvum). *Capsula* in fundo calycis persistentis bilocularis, bivalvis: *dissepimentum* valvulis parallelum demum liberum; *placentæ* dissepimento intima adnatæ.—Caules *lignosi aut herbacei, filiformes, procumbentes et sæpe repentes.* Folia *sparsa, solitaria, interdum gemina, integra et integerrima.* Flores *extra-axillares aut oppositifolii, solitarii, subsessiles, albi. Kunth.*

Specific Name and Character.

NIEREMBERGIA *calycina;* pubescenti-glandulosa, caulibus herbaceis procumbentibus, foliis oppositis alternisque obovatis petiolatis, pedunculis solitariis lateralibus (extra-alaribus), calycibus (magnis) campanulatis lobis obovatis foliaceis.

This is another remarkable species of NIEREMBERGIA, for a knowledge of which we are indebted to Mr. TWEEDIE, who discovered it on the Uraguay River, and who sent seeds to our gardens, and dried specimens to our collections. From the former plants were raised in the Glasgow Botanic Garden, where they flowered in a warm situation in the

greenhouse in the months of September and October. Of all the species with which we are acquainted (and we possess yet some undescribed ones gathered between Buenos Ayres and Mendoza) the present exhibits the longest tube to the flower, which appears the more remarkable from its arising from so broad a calyx. In the form of the leaves, the species comes nearest to the original N. *repens,* Fl. Per., but the habit and the form of the calyx are extremely different in the two.

Descr. The *stems* are decumbent and branched, scarcely woody, yet the plant promises to be of perennial duration, diffusely branched; the *branches* pubescenti-glandular, as is the whole plant except the corolla. *Leaves* sometimes opposite, sometimes alternate, broadly obovate, entire, rather obtuse at the point, at the base tapering into a short footstalk. *Peduncle* lateral upon the stem, not arising from an axil, short, single-flowered. *Calyx* large, campanulate, with five obovate, leafy lobes, each marked with a nerve in the centre. *Corolla* with a very slender *tube,* almost three inches long, yellowish, suddenly expanded at the summit into a rather large, broadly campanulate, five-lobed, white *limb,* its base alone yellow. *Stamens* five, springing from the mouth of the tube, curved upwards, two a little longer than the rest, having their anthers lodged within the transverse, curved, green *stigma.* Our wild specimens differ in no respect from the cultivated ones, except in being smaller.

Fig. 1. Stamen, as situated with regard to the Style and Stigma: *magnified.*

3372.

Pub. by S. Curtis, Glazenwood Essex Decr. 1. 1834.
Swan Sc

(3372)

HELIOPSIS LÆVIS. SMOOTH-LEAVED HELIOPSIS.

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Class and Order.

SYNGENESIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Radius uniserialis. *Achenium* angulato-compressum, omnino calvum, glabrum, disco epigyno parvo.—Herbæ *Americanæ, foliis oppositis, integris ; capitulis luteis, solitariis, ramos superne aphyllos terminantibus ; involucris imbricatis ; rachide conico. Less.*

Specific Character and Synonyms.

HELIOPSIS *lævis ;* caule glaberrimo, foliis glabris ovato-acuminatis serratis, involucri squamis externis lanceolatis subserratis. *Dun.*
HELIOPSIS lævis. *Pers. Syn. Pl. v.* 2. *p.* 473. *Pursh, Fl. Am. v.* 2. *p.* 563. *Dun. in Mem. du Mus. v.* 5. *p.* 55.
BUPHTHALMUM helianthoides. *Linn.—L'Hérit. Stirp. p.* 93. *t.* 45. *Ait. Hort. Kew. ed.* 2. *v.* 5. *p.* 125.
SILPHIUM solidaginoides. *Linn. Sp. Pl. v.* 1302.
HELIANTHUS lævis. *Linn. Sp. Pl. p.* 1278.
RUDBECKIA oppositifolia. *Linn. Sp. Pl. p.* 1280.

The Genus HELIOPSIS (from ηλιος the *sun* and ο Ψις, *a resemblance)* was established by PERSOON upon the species here figured, a native of the United States. To this was added another North American species, H. *scabra,* differing indeed but slightly from the present one, and perhaps not specifically, H. *buphthalmoides* of Peru and H. ? *dubia,* a very doubtful species, as its name implies, of South America, by DUNAL ; and H. *canescens,* a Columbian plant. H. *lævis*
is

is an old inhabitant of our gardens, where it is a hardy, herbaceous plant, flowering in the autumn.

Descr. *Stem* erect, herbaceous, obtusely angular, much branched. *Leaves* opposite, petiolate, ovate, triple-nerved and veiny, smooth, acuminate, coarsely serrated, the upper ones with winged *petioles,* the uppermost of all nearly sessile. *Peduncles* mostly terminal, single-flowered. *Involucre* hemisphærical; scales broadly lanceolate, spreading, in a double series. *Florets of the ray* ligulate. *Germen* compressedly triangular, quite destitute of pappus. *Florets of the disk* orange. *Anthers* black. *Stigmas* short, orange. *Scales* of the *involucre* linear, chaffy.

Fig. 1. Floret of the Ray. 2. Floret of the Disk. 3. Achenium: *magnified.*

3373.

Pub. by S. Curtis, Glazenwood Essex Dec.r 1. [illegible]

(3373)

HÆMANTHUS CARNEUS. HAIRY, PINK HÆMANTHUS.

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Spatha 3-multivalvis, corollæformis, umbella fovens, erecta, rarius patens. *Cor.* 6-partita, tubulosa, erecta, regularis; limbo erecto vel patenti, tubum rectum excedente; laciniis angustis. *Stam.* summo tubo inserta, erecta, exserta. *Antheræ* suberectæ. *Stylus* setiformis. *Stigma* simplex vel brevissime trilobum. *Bacca* globosa oblongave, lævis, trilocularis: loculis 1-spermis, sæpius abortientibus. *Ker.*

Specific Character and Synonyms.

HÆMANTHUS[*] *carneus;* foliis 2 rotundato-ovatis acuminatis scapoque pilis retrorsis undique hirsutis, spatha sphacelata reflexa umbella breviora, staminibus inclusis. *Ker.*

HÆMANTHUS carneus. *Ker, in Bot. Reg. t.* 509. *Schult. Syst. Veget. v.* 7. *p.* 892. *Spreng. Syst. Veget. v.* 2. *p.* 57.

A native of the Cape of Good Hope, like all the rest of the Genus HÆMANTHUS, from which indeed the present species differs in the spatha or involucre not being coloured, nor disposed in the upright posture which affords the corolla-like appearance observable in the majority of the

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[*] From αιμα, *blood,* and ανθος, a *flower;* on account of the deep red colour of the flower of the most common species, H. *coccineus.*

Genus: nor are included stamens prevalent in the other species. Our plant flowered in the greenhouse of the Glasgow Botanic Garden, September, 1834.

Descr. The *bulb* is described as "compressedly conical, the laminæ bifariously imbricated, inner ones longest." *Leaves* two, arising from the summit of the root, broadly elliptical, obtuse, nerved, very hairy, with the hairs pointing downwards, striated: in our specimen the leaves were almost fully formed, while the flowers were in perfection. *Scape* on the outside of one of the leaves, longer than they, terete, hairy. *Spatha* of three or four membranaceous, reflexed leaves, greenish, tinged with purple. *Umbel* of many flowers, lax. *Corolla* pale rose-coloured: *tube* short; *limb* erecto-patent. *Stamens* included, three shorter and three longer ones. *Germen* inferior, almost globose.

Fig. 1. Flower, with the Limb of the Corolla removed: *magnified.*

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